

8. SMALL PILOT PROJECTS

8.1 Purpose

In the Study, it is planned that the rural development plan which are formulated by the Study Team should be polished up by reviewing outcomes through implementation of pilot projects. In this context, 18 pilot projects were selected out of 59 approaches (project components) which were chosen by the criteria mentioned in Chapter 7. The detail plans for each pilot project was studied and formulated as shown in this chapter.

The Pilot Projects will be carried out for the following purposes:

- Monitoring and assessment of technical soundness of the Project through the implementation of the pilot projects
- Monitoring and assessment of organization for implementation and support system for the Projects and its management (operation and maintenance) through the implementation of the pilot projects
- Monitoring and assessment of improvement for the farmers' capability in solving problems and constraints through the implementation of the pilot project

Based on the results of monitoring and assessments above, problems and constraints on the implementation of the Projects and its management will be identified. Countermeasures for these identified problems and constraints will be proposed for finalization of the procedure of survey and formulation of project development.

8.2 Selection Criteria and Selection of Pilot Projects

8.2.1 Selection Criteria

As mentioned in section 7.3, Development Plan, 59 project components were selected, consisting of 11 for Xeatzán Bajo, 14 for Panyebar, 16 for Pachum and 18 for Palestina. For selection of pilot projects, evaluation for these 58 project components was made on the basis of the following 5 evaluation factors.

- (1) Degree of farmers' desire and perception on implementation of pilot projects;
- (2) Economic efficiency (cost performance);
- (3) Possibility of materialization of pilot projects by other authorities;
- (4) Duration necessary for setting up organization(s); and

(5) Demonstration and ripple effects from the pilot projects

The evaluation of project components was made by giving weighted points to each evaluation factor and selection was made based on the total weighted point. The evaluation criteria and corresponding weighted points are shown in the following table.

Evaluation factor	Grade	Description	Point	Weighted point (*)
Degree of farmers' perception	1	No (there is no perception according to the participatory survey results)	1	0.1
	2	Strong (less than 6th rank of prioritized development approaches in the participatory survey results)	2	0.2
	3	Very strong (1st-5th ranks of prioritized development approaches in the participatory survey results)	3	0.3
Economic efficiency	1	Low economic viability	1	0.2
	2	Medium economic viability	2	0.4
	3	High economic viability	3	0.6
Possibility of materialization	1	The project component is planned and/or constructed at present by other organization(s)	1	0.3
	2	There is a plan that other organization will implement in near future.	2	0.6
	3	There is no plan that other organization will execute in near future.	3	0.9
Duration necessary for setting up organization	1	Long time necessary for setting up organization	1	0.2
	2	Short to medium time necessary for setup organization	2	0.4
	3	At present there is an organization or implementation can be performed by simple setup organization.	3	0.6
Demonstration and ripple effects	1	The ripple effects of the project to other areas can not be expected.	1	0.2
	2	The ripple effects of the project to other areas can be expected.	2	0.4
	3	The ripple effects of the project to other areas can be highly expected.	3	0.6

* Weighted point is calculated multiplying point by weight %.

Item	Weight (%)
1. Degree of farmers' perception	10
2. Economic efficiency	20
3. Possibility of materialization	30
4. Duration necessary for setting up organization	20
5. Demonstration and ripple effects	20

In this study, the project component of which total weighted point is above 2.5 was selected as pilot project.

8.2.2 Selected Pilot Projects

Based on the selection criteria, all components of the rural development plans in the 4 model areas were evaluated. The results of the evaluation are shown below:

(1) Xeatzán Bajo Model Area

No	Project Components	Degree of farmer's perception		Economic efficiency		Possibility of materialization		Duration necessary for setting up organization		Demonstration and ripple effects		Total weighted point	Evaluation and adoption
		Grade	Weighted point	Grade	Weighted point	grade	Weighted point	grade	Weighted point	Grade	Weighted point		
	<i>Environmental and Conservation Plan</i>												
a-3	Reforestation plan	1	0.1	2	0.4	3	0.9	2	0.4	2	0.4	2.2	
	<i>Plan for increasing income generation</i>												
b-1	Plan for making composts	1	0.1	1	0.2	2	0.6	2	0.4	3	0.6	1.9	
b-5	Mini-irrigation plan	3	0.3	2	0.4	3	0.9	3	0.6	2	0.4	2.6	○
b-9	Agro-processing development plan	3	0.3	2	0.4	3	0.9	1	0.2	1	0.2	2.0	
b-10	Plan of direct sale of vegetables	2	0.2	2	0.4	3	0.9	1	0.2	1	0.2	1.9	
b-12	Institutional plan for fostering nucleus farmers	1	0.1	3	0.6	3	0.9	2	0.4	2	0.4	2.4	
b-13	Plan of revolving fund for hand weaving thread	3	0.3	2	0.4	3	0.9	3	0.6	2	0.4	2.6	○
	<i>Improvement plan for living environments</i>												
c-1	Rehabilitation plan of reads in the village	3	0.3	1	0.2	2	0.6	3	0.6	1	0.2	1.9	
c-2	Rehabilitation plan of regional roads	3	0.3	1	0.2	2	0.6	3	0.6	1	0.2	1.9	
c-5	Water quality improvement plan for the existing drinking water supply	1	0.1	3	0.6	3	0.9	2	0.4	3	0.6	2.6	○
c-11	Plan for installation of minimal pharmacy unit (MPU)	1	0.1	2	0.4	3	0.9	3	0.6	2	0.4	2.4	

(2) Panyebar Model Area

No	Project Components	Degree of farmers' perception		Economic efficiency		Possibility of materialization		Duration necessary for setting up organization		Demonstration and ripple effects		Total weighted point	Evaluation and adoption
		Grade	Weighted point	Grade	Weighted point	Grade	Weighted point	Grade	Weighted point	Grade	Weighted point		
	<i>Environmental and Conservation Plan</i>												
a-2	Soil conservation plan for steep farm lands	2	0.2	2	0.4	2	0.6	2	0.4	3	0.6	2.2	
a-3	Reforestation plan	2	0.2	2	0.4	2	0.6	2	0.4	3	0.6	2.2	
a-4	Agro-forestry development plan	2	0.2	2	0.4	2	0.6	2	0.4	3	0.6	2.2	
	<i>Plan for increasing income generation</i>												
b-1	Plan for making composts	1	0.1	1	0.2	2	0.6	3	0.6	3	0.6	2.1	
b-6	Layer-chicken raising plan for women's groups	3	0.3	2	0.4	3	0.9	1	0.2	2	0.4	2.2	
b-7	Coffee production improvement plan	3	0.3	2	0.4	3	0.9	2	0.4	3	0.6	2.6	○
b-8	Coffee processing plan	3	0.3	1	0.2	3	0.9	2	0.4	2	0.4	2.2	
b-12	Institutional plan for fostering nucleus farmers	2	0.2	3	0.6	2	0.6	2	0.4	3	0.6	2.4	
	<i>Improvement plan for living environments</i>												
c-2	Rehabilitation plan of regional roads	3	0.3	1	0.2	1	0.3	3	0.6	1	0.2	1.6	
c-4	Rehabilitation plan for drinking water system	3	0.3	1	0.2	3	0.9	3	0.6	3	0.6	2.6	○
c-5	Water quality improvement plan for the existing drinking water supply	1	0.1	3	0.6	3	0.9	3	0.6	3	0.6	2.8	○
c-9	Plan medicine growing plan	1	0.1	2	0.4	2	0.6	2	0.4	3	0.6	2.1	
c-11	Plan for installation of minimal pharmacy unit (MPU)	2	0.2	2	0.4	3	0.9	1	0.2	2	0.4	2.1	
c-14	Coffee processing plan for workload reduction in mountainous area	1	0.1	2	0.4	3	0.9	3	0.6	3	0.6	2.6	○

(3) Pachum Model Area

No	Project Components	Degree of farmer's perception		Economic efficiency		Possibility of materialization		Duration necessary for setting up organization		Demonstration and ripple effects		Total weighted point	Evaluation and adoption
		Grade	Weighted point	Grade	Weighted point	Grade	Weighted point	Grade	Weighted point	Grade	Weighted point		
	<i>Environmental and Conservation Plan</i>												
a-1	Restoration plan of the collapsed lands	2	0.2	1	0.2	3	0.9	1	0.2	3	0.6	2.1	
a-2	Soil conservation plan for steep farm lands	2	0.2	2	0.4	3	0.9	2	0.4	3	0.6	2.5	
a-3	Reforestation plan	2	0.2	3	0.6	3	0.9	3	0.6	3	0.6	2.9	○
a-4	Agro-forestry development plan	2	0.2	3	0.6	3	0.9	1	0.2	3	0.6	2.5	
	<i>Plan for increasing income generation</i>												
b-5	Mini-irrigation plan	3	0.3	2	0.4	3	0.9	1	0.2	2	0.4	2.2	
b-6	Layer-chicken raising plan for women's groups	3	0.3	2	0.4	3	0.9	2	0.4	3	0.6	2.6	○
b-12	Institutional plan for fostering nucleus farmers	2	0.2	2	0.4	3	0.9	2	0.4	2	0.4	2.3	
	<i>Improvement plan for living environments</i>												
c-1	Rehabilitation plan of roads in the village	3	0.3	1	0.2	2	0.6	3	0.6	1	0.2	1.9	
c-2	Rehabilitation plan of regional roads	3	0.3	1	0.2	2	0.6	3	0.6	1	0.2	1.9	
c-3	Plan of rural electricity	2	0.2	1	0.2	3	0.9	3	0.6	1	0.2	2.1	
c-5	Water quality improvement plan for the existing drinking water supply	1	0.1	3	0.6	3	0.9	2	0.4	3	0.6	2.6	○
c-6	Plan of extension use of improved cooking stoves and of sauna bath "Temascal"	2	0.2	3	0.6	3	0.9	3	0.6	3	0.6	2.9	○
c-7	Plan of provision toilette facilities	2	0.2	3	0.6	2	0.6	3	0.6	2	0.4	2.4	
c-8	Plan of night time health education	3	0.3	3	0.6	2	0.6	3	0.6	2	0.4	2.5	
c-10	Improvement plan of service quality given to comadronas	3	0.3	3	0.6	2	0.6	3	0.6	2	0.4	2.5	
c-11	Plan for installation of minimal pharmacy unit (MPU)	3	0.3	2	0.4	3	0.9	3	0.6	2	0.4	2.6	○

(4) Palestina Model Area

No	Project Components	Degree of farmer's perception		Economic efficiency		Possibility of materialization		Duration necessary for setting up organization		Demonstration and ripple effects		Total weighted point	Evaluation and adoption
		Grade	Weighted point	Grade	Weighted point	Grade	Weighted point	Grade	Weighted point	Grade	Weighted point		
	<i>Environmental and Conservation Plan</i>												
a-2	Soil conservation plan for steep farm lands	2	0.2	1	0.2	3	0.9	2	0.4	2	0.4	2.1	
a-3	Reforestation plan	2	0.2	2	0.4	3	0.9	2	0.4	2	0.4	2.3	
a-5	Management plan of water quality	2	0.2	2	0.4	3	0.9	1	0.2	2	0.4	2.1	
a-6	Solid wastes treatment plan	1	0.1	1	0.2	3	0.9	1	0.2	2	0.4	1.8	
	<i>Plan for increasing income generation</i>												
b-1	Plan for making compost	1	0.1	2	0.2	2	0.6	1	0.2	2	0.4	1.5	
b-2	Plan of model farm on potato production	3	0.3	3	0.6	3	0.9	2	0.4	3	0.6	2.8	○
b-3	Potato storage plan	3	0.3	2	0.4	3	0.9	2	0.4	3	0.6	2.6	○
b-4	Potato processing plan	3	0.3	1	0.2	3	0.9	1	0.2	2	0.4	2.0	
b-5	Mini-irrigation plan	3	0.3	2	0.4	3	0.9	2	0.4	3	0.6	2.6	○
b-6	Layer-chicken raising plan for women's groups	1	0.1	2	0.4	3	0.9	2	0.4	2	0.4	2.2	
b-12	Institutional plan for fostering nucleus farmers	1	0.1	3	0.6	3	0.9	2	0.4	2	0.4	2.4	
	<i>Improvement plan for living environments</i>												
c-1	Rehabilitation plan of roads in the village	3	0.3	1	0.2	2	0.6	3	0.6	1	0.2	1.9	
c-4	Plan of rural electricity	2	0.2	1	0.2	2	0.6	3	0.6	2	0.4	2.0	
c-5	Water quality improvement plan for the existing drinking water supply	1	0.1	3	0.6	3	0.9	3	0.6	3	0.6	2.8	○
c-8	Plan of night time health education	2	0.2	2	0.4	3	0.9	2	0.4	3	0.6	2.5	
c-10	Improvement plan of service quality given to comadronas	2	0.2	2	0.4	3	0.9	2	0.4	3	0.6	2.5	
c-12	Municipality community health activity plan	2	0.2	2	0.4	3	0.9	3	0.6	3	0.6	2.7	○
c-13	Plan for migrant people to the coastal areas	2	0.2	2	0.4	3	0.9	3	0.6	3	0.6	2.7	○

As a result, 18 pilot projects were selected as shown below:

(a) Xeatzán Bajo Model Area

- Mini-irrigation plan

- Plan of revolving fund for hand weaving thread
 - Water quality improvement plan for the existing drinking water supply
- (b) Panyebar Model Area
- Coffee production improvement plan
 - Rehabilitation plan for drinking water system
 - Water quality improvement plan for the existing drinking water supply
 - Coffee processing plan for workload reduction in mountainous area
- (c) Pachum Model Area
- Reforestation plan
 - Layer-chicken Raising Plan for Women's Group
 - Water quality improvement plan for the existing drinking water supply
 - Plan for extension use of improved cooking stoves and of sauna baths "Temascal"
 - Plan for installation of minimal pharmacy unit
- (d) Palestina Model Area
- Plan for model farm on potato production
 - Potato storage plan
 - Mini-irrigation plan
 - Water quality improvement plan for the existing drinking water supply
 - Municipality community health activity plan
 - Plan for migrant people to the coastal areas

8.3 Plans of Pilot Projects

Each plan of 18 Pilot Projects is summarized in Project Design Matrix sheets and Project Profiles as shown below;

8.4 Implementation of Pilot Projects

The proposed organization is shown below. The JICA Study Team will be responsible for overall management of implementation of Pilot Projects in corporation with MAGA. The formulated 18 Pilot Projects cover various fields of development and work components, including (i) environmental and conservation plan (ii) plans for increasing income generation and improvement plan for living conditions. With exception of the Pilot Projects in an agricultural field that MAGA will implement, participation of other organizations relevant to the implementation of Pilot Projects in other fields is essential. Therefore, it is proposed to establish a steering coordination committee of representatives from relevant organizations.

The committee headed by a representative of MAGA. The member of the committee will consist of representatives from SEGEPLAN, MSPAS, ICTA, FIS, INTECAP, JICA/JOCV office, governors of the four provinces (Chimaltenango, Sololá, Totonicapán and Quetzaltenango), four relevant municipalities (Patzun, Panyebar, Santa Maria Chiquimula, and Palestina de Altos) and JICA Study Team.

Provincial offices of the organizations that participate in a steering committee will make supervision of project implementation and monitoring for Pilot Projects. The results of supervision and monitoring will be submitted to the JICA Study Team.

With respect to farmers' organization for implementation of project, as mentioned in chapter 7, farmer's participation also becomes one of the most important factors in the case of implementation of Pilot Projects. The basic concept for farmers' participation composed of following three components.

- (1) Participation in project implementation
- (2) Farmers' sharing of construction cost
- (3) Operation and maintenance of project by farmers themselves

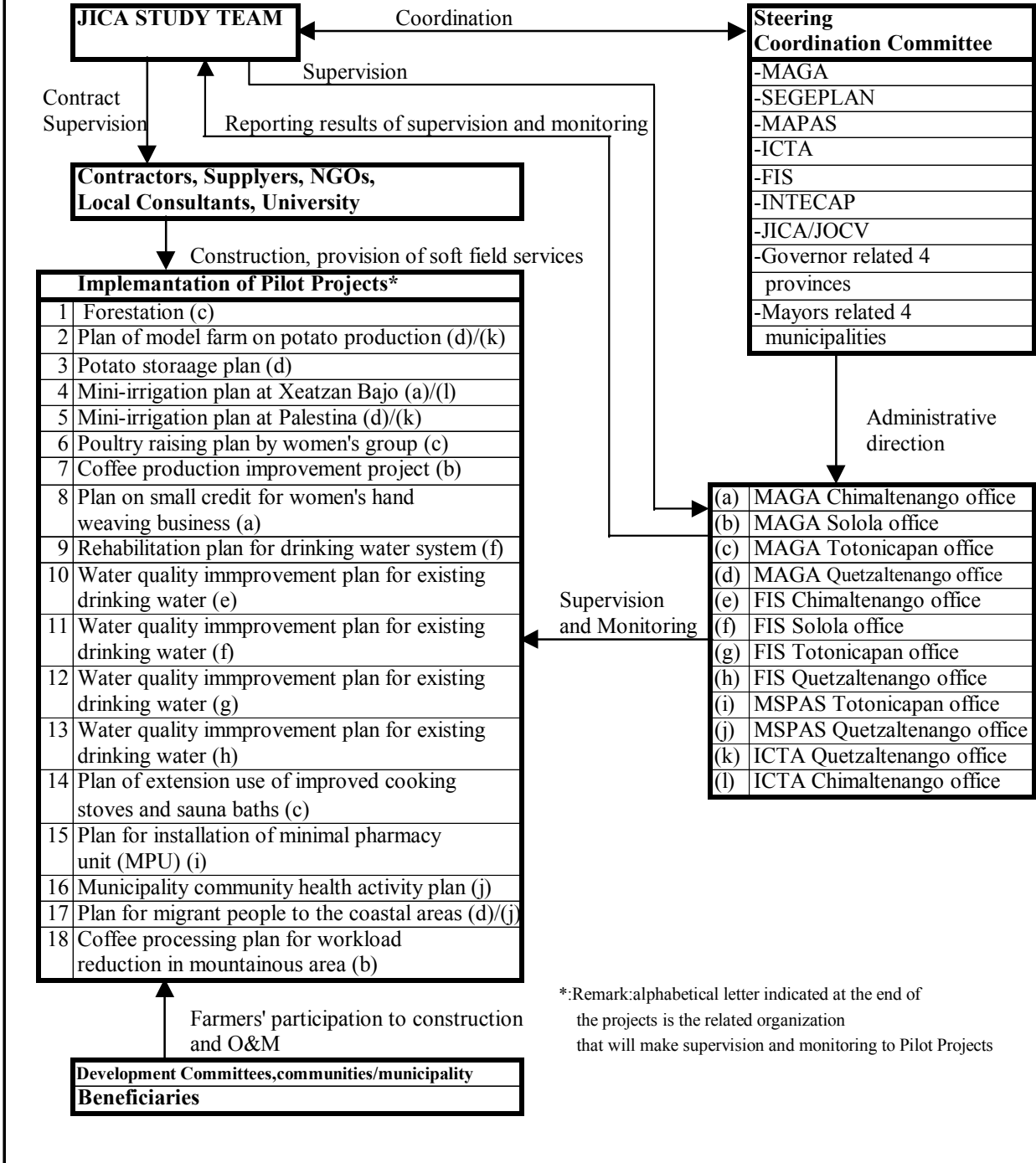
For each Pilot Project, development committee will be made for participation in construction work and O&M work after construction of Pilot Project. In set up of development committee, existing development committee, if any, will be used as much as possible.

With regard to cost sharing, it is planned that the government of Japan will provide a grant for main facilities, training costs and technical guidance. Farmer

side bears provision of labor force and lands necessary for construction of facilities, cost for farm inputs, irrigation facility on farm level and O&M cost of Pilot Project. It is planned that cost necessary for farm inputs, irrigation facility on farm level, and medicines at first cultivation stage will be loaned to beneficiary farmers with no or very low interest rate . After construction of Pilot Project, each development committee will manage it.

Though implementation period of each Pilot Project is different, total period of implementation and monitoring of Pilot Projects will be 15 months. After 15 months, it is expected that monitoring work of each Pilot Project should be also continued

Implementation Organization of 18 Pilot Projects



Implementation of Pilot Projects*	
1	Forestation (c)
2	Plan of model farm on potato production (d)/(l)
3	Potato storage plan (d)
4	Mini-irrigation plan at Xeatzan Bajo (a)/(l)
5	Mini-irrigation plan at Palestina (d)/(k)
6	Poultry raising plan by women's group (c)
7	Coffee production improvement project (b)
8	Plan on small credit for women's hand weaving business (a)
9	Rehabilitation plan for drinking water system (f)
10	Water quality improvement plan for existing drinking water (e)
11	Water quality improvement plan for existing drinking water (f)
12	Water quality improvement plan for existing drinking water (g)
13	Water quality improvement plan for existing drinking water (h)
14	Plan of extension use of improved cooking stoves and sauna baths (c)
15	Plan for installation of minimal pharmacy unit (MPU) (i)
16	Municipality community health activity plan (j)
17	Plan for migrant people to the coastal areas (d)/(j)
18	Coffee processing plan for workload reduction in mountainous area (b)

Steering Coordination Committee	
-MAGA	
-SEGEPLAN	
-MAPAS	
-ICTA	
-FIS	
-INTECAP	
-JICA/JOCV	
-Governor related 4 provinces	
-Mayors related 4 municipalities	

(a)	MAGA Chimaltenango office
(b)	MAGA Solola office
(c)	MAGA Totonicapan office
(d)	MAGA Quetzaltenango office
(e)	FIS Chimaltenango office
(f)	FIS Solola office
(g)	FIS Totonicapan office
(h)	FIS Quetzaltenango office
(i)	MSPAS Totonicapan office
(j)	MSPAS Quetzaltenango office
(k)	ICTA Quetzaltenango office
(l)	ICTA Chimaltenango office

*-Remark:alphabetical letter indicated at the end of the projects is the related organization that will make supervision and monitoring to Pilot Projects

9. CONCLUSIONS AND RECOMMENDATIONS

- It may be concluded that the peoples in the Central Highland Region of Guatemala seriously suffer from poverty from the view points of low income, poor quality of living environments and devastation of natural resources.
- It may be concluded that the methodology of the participatory survey approach introduced into this Study is very effective in extracting the problems, needs and potentials from the farmers' viewpoints and motivating community people, that are critical factors for the formulation of sustainable bottom-up rural development plans.
- It is recommended that 18 Pilot Projects selected in this Study should be implemented as soon as possible. Through the implementation of the Pilot Projects, countermeasures for problems and constraints should be identified and the methodology of surveys and formulation of project development in this Study should be improved.
- It is proposed that a steering coordination committee headed by MAGA should be established before commencement of the Pilot Projects for their smooth implementation and effective monitoring.
- It is recommended that the implementation of the projects on the sustainable rural development should be carried out for four provinces of Chimaltenango, Sololá, Totonicapán and Quetzaltenango based on the above improved methodology.

**Pilot Projects for Sustainable Rural Development for
Reduction of Poverty in the Central Highland Region of the Republic of Guatemala**

Community: 4 Model Micro-basin
Period: Sep. 2001 ~ Dec. 2002

Target Group: People in Model Micro-basin
Implt. Organization: MAGA, JICA, Farmers' organization

June, 2001

Narrative Summary	Verifiable Indicators	Means of Verification	Important Assumptions
<p>Overall Goal</p> <p>1. Poverty condition in central highland region will be mitigated.</p>	<p>Poverty indicator of rural area will be improved up to the provincial average by 2015.</p>	<p>FIS Poverty Indicator and monitoring on Farmers.</p>	<p>There will be no drastic change in development policy of Guatemalan Government.</p>
<p>Project Purpose</p> <p>1. Natural resources are properly managed and conserved. 2. Rural income level is improved. 3. Living condition in/around communities will be upgraded.</p>	<p>1. Coverage of forest will increase 2. Rural income level will be upgraded to municipal average. 3. Rate of household with tap water will be increased. 4. Morbidity of community people will decrease.</p>	<p>1. Monitoring survey 2. Statistics, Sample survey 3. Statistics, Community record 4. Statistics, Community record 5. Statistics, Community record 6. Record at health center</p>	<p>1. Similar type of projects will be implemented in other communities by utilizing monitoring results of the project.</p>
<p>Output</p> <p>Natural resource conservation 1 Reforestation is properly implemented.</p> <p>Income level improvement 2 Potato productivity is improved. 3 Selling price of potato is improved. 4 Vegetables production by produced and sold also in dry season. 5 Eggs and old chickens are sold. 6 Coffee productivity is improved. 7 Profitability of Huipil production is improved.</p> <p>Living condition upgrading 8 Drinking water is continuously supplied. 9 Drinking water quality will be improved. 10 Improved stove and sauna are diffused. 11&12 Basic medicines become easily available at reasonable price. 13 Health condition of migrants in coastal area is improved. 14 Workload of coffee transportation is reduced.</p>	<p>1 Area planted 2 Unit yield of potato 3 Selling price of potato 4 Amount of produced and sold during dry season 5 Sold amount of egg and chicken 6 Unit yield of coffee 7 Net profit from Huipil production 8. Times of water suspension 9. Number of diarrhea patients 10 Consumption amount of firewood 11&12 Monthly purchasing cost of medicine is reduced. 13 Top 10 diseases of migrant workers are reduced by 15%. 14 Time consumption for coffee transportation is reduced.</p>	<p>1 Record of forestation 2 Sample survey 3 Monitoring on sale price 4 Sale record or interview survey 5 Sale record or interview survey 6 Sample survey 7 Sample survey 8. Monitoring record of water supply system 9. Record at health center/post 10 Sample survey 11&12 Sample survey 13 Sample survey 14 Sample survey</p>	<p>1. There is no abundant supply or sever reduction in demand for agricultural products. 2. Present situation on labor demand will not drastically change 3. People continuously stay in the central highland region.</p>
<p>Activity</p> <p>Natural resource conservation 1 Implementation of reforestation</p> <p>Income level improvement 2 Installation of model farm 3 Installation of potato storage 4 Construction of mini-irrigation system 5 Raising layer-chicken and sale of eggs and old chicken 6 Coffee production improvement 7 Promotion of Huipil production</p> <p>Living condition upgrading 8 Rehabilitation of water supply system 9 Improvement of water quality 10 Diffusion of improved stove and sauna facilities 11 Installation of Minimal Pharmacy Unit 12 Promotion and improvement of municipal health service 13 Training of migrants to coastal area 14 Workload reduction of coffee transportation</p>	<p>Inputs</p> <p>Natural resource conservation 1 Reforestation Q 140,800 (PC)*</p> <p>Income level improvement 2 Model farm..... Q 13,200 (PL) 3 Potato storage..... Q 655,800 (PL) 4 Mini-irrigation..... Q 906,000 (XB)* Q 1,228,000 (PL)* 5 Layer-chicken raising..... Q 73,100 (PC) 6 Coffee production improvement..... Q 128,100 (PB) 7 Promotion of Huipil production..... Q 261,900 (XB)</p> <p>Living condition upgrading 8 Rehabilitation of water supply system..... Q 609,200 (PB) 9 Improvement of water quality Q 436,600 (4 areas) 10 Improved stove and sauna facilities..... Q 166,000 (PC) 11 Minimal Pharmacy Unit installation..... Q 51,400 (PC) 12 Municipal health service improvement..... Q 91,900 (PL) 13 Training of migrants to coastal area..... Q 394,000 (PL) 14 Workload reduction of coffee transportation Q 75,400 (PB)* Total Q 5,231,400</p>	<p>1. No natural disaster occurs</p> <p>Pre-conditions 1. There is no strong objection among community people against implementation of projects. 2. Government will support the implementation of the projects</p>	

XB: Xeatzan Bajo, PB: Panyebar, PC: Pachum, PL: Palestina

PROJECT PROFILE

Project Name: Mini-Irrigation Plan (b-5)

Community: Xeatzan Bajo

Item	Contents	Remarks												
1. Objectives	To increase farmers income through: i) increase in cropping intensity from 225 % under present condition up to 300 % with project conditions; ii) increase crops yield by about 1.5 times; iii) increase quality of produce, and therefore attain better farm gate prices and iv) organization of users association in terms of O&M of facilities and marketing.													
2. Number of Beneficiaries	80 farmers (4.6 ha)													
3. Implementation Organization	Irrigation Committee of Xeatzan Bajo													
4. Project Contents														
1) Project Outline	Presently most of the land in Xeatzan Bajo area is used for vegetable production under rainfed condition, at twice of cultivation in a year. Crops yield under rainfed condition is very unstable, and because majority of farmers produces at the same time, farm gate prices are depressed during harvesting in the rainy season. This project aims to stabilize and increase the farmers' incomes by means of introducing a small-scale irrigated cultivation with spring water, which is located in the village.													
2) Facility / Activity	<table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: center; border-bottom: 1px solid black;"><i>Facilities/Activities</i></th> <th style="text-align: center; border-bottom: 1px solid black;"><i>Implementator</i></th> </tr> </thead> <tbody> <tr> <td>1) Pump station (1 pump, 1 house)</td> <td>Contractor (1-3)</td> </tr> <tr> <td>2) Pipeline ; Conduction pipeline : 1km Distribution pipeline : 9km</td> <td></td> </tr> <tr> <td>3) Elevated regulating tank : 75 m³</td> <td></td> </tr> <tr> <td>4) Technical assistance: farming practices and marketing</td> <td>ICTA / marketing company</td> </tr> <tr> <td>5) Organization of the irrigation committee</td> <td>The study team</td> </tr> </tbody> </table>	<i>Facilities/Activities</i>	<i>Implementator</i>	1) Pump station (1 pump, 1 house)	Contractor (1-3)	2) Pipeline ; Conduction pipeline : 1km Distribution pipeline : 9km		3) Elevated regulating tank : 75 m ³		4) Technical assistance: farming practices and marketing	ICTA / marketing company	5) Organization of the irrigation committee	The study team	
<i>Facilities/Activities</i>	<i>Implementator</i>													
1) Pump station (1 pump, 1 house)	Contractor (1-3)													
2) Pipeline ; Conduction pipeline : 1km Distribution pipeline : 9km														
3) Elevated regulating tank : 75 m ³														
4) Technical assistance: farming practices and marketing	ICTA / marketing company													
5) Organization of the irrigation committee	The study team													
3) Organization for O&M	Irrigation committee													
4) Construction Period	4.5 month													
5. Project Cost	1) Construction cost..... Q 880,000 2) Training cost..... Q 26,000 3) Total Cost Q 906,000	Cost born by beneficiaries: Q 92,000												

6. Monitoring & Evaluation

<i>Item</i>	<i>Frequency</i>	<i>Data collector</i>	<i>Aggregation</i>	<i>Decision Maker</i>
1) No. of beneficiary's attendants to the construction work	Everyday during construction period	Irri. Committee	MAGA	Study Team
2) Progress of construction works	Every half month	MAGA/Study Team	Study Team	Study Team
3) Total benefits	Before and after 1 st crop season	MAGA/Study Team	Study Team	Study Team
4) Collection rate of the water charge	Every month	Irri. Committee	MAGA/ Study Team	Study Team

7. Plan of Operation

<i>Item</i>	<i>2001</i>					<i>2002</i>												
	08	09	10	11	12	01	02	03	04	05	06	07	08	09	10	11	12	
1) Construction works																		
2) Technical assistance																		
3) Cultivation																		
4) Monitoring		△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△

**PDM #03: Mini-irrigation Plan (b-5)
(Pilot Project)**

Community: Xeatzan Bajo
 Period: Sep. 2001 ~ Nov. 2002

Target Group: Farmers
 Implt. Organization: MAGA & Water Users' Association

June, 2001

Narrative Summary	Verifiable Indicators	Means of Verification	Important Assumptions
Overall Goal 1. Poverty condition in central highland region will be mitigated.	1. Poverty indicator of rural area will be improved up to the provincial average by 2015.	1. FIS Poverty Indicator and monitoring on Farmers.	1. There will be no drastic change in development policy of Guatemalan Government.
Project Purpose 1. Income level of the beneficiaries will be improved.	1. Income level of the beneficiaries (income from vegetable production) will increase.	1. Monitoring of farm income through interview survey.	1. Similar type of projects will be implemented in other neighboring communities with utilizing the monitoring results of this project.
Outputs 1. Irrigation system is used. 2. Water users' association is in act. 3. Water charge is properly collected. 4. The facility is properly maintained by users. 5. Farmers master skill of vegetable production. 6. Increase of land use intensity from 2 harvests to 3 harvests per year. 7. Increase of crop yield and quality.	1. Number of water users association and number of facility users 2. Collection rate is more than 80%. 3. Condition of operation and maintenance of the facility (Utilization of water charge and actual working days of the facility) 4. Number of farmers that practice vegetable production.	1. Record of water users' association and water users 2. Record of water charge collection (account book) 3. Monitoring of the facility 4. Monitoring of farmers 5. Monitoring on agricultural production	1. Demand for vegetable will not be worsen. 2. There is no extreme reduction in the price of vegetable
Activities 1. Construction of irrigation system. 2. Establishment of water users association and its strengthening 3. Collection of water fee by water users' association. 4. Operation and maintenance of system by water users themselves 5. Training on vegetable production 6. Acquisition of farm inputs for vegetable production 7. Arrangements for obtaining credit from Rural Bank or contract growers 8. Arrangements for marketing of vegetables	Inputs 1. Construction cost, training cost for operation and maintenance of irrigation system and : Q 880,000 2. Cost for technical assistance of agricultural farm practices and organizational assistance for water user's association (its establishment and strengthening) : Q 26,000 3. Total Cost: <u>Q 906,000</u> 4. Cost for provision of initial farm inputs of vegetable production (born by beneficiaries) : Q 92,000	1. There is no abnormal weather such as drought, abnormal scale typhoon, etc. 2. There is no abnormal outbreak of pests and/or diseases of vegetables.	Pre-conditions 1. People have intention to participate in construction of irrigation system and are willing to pay necessary cost (water charge, etc.)

PROJECT PROFILE

Project Name: Plan of Revolving Fund for Hand Weaving Thread (b-13)

Community: Xeatzan Bajo

Item	Contents	Remarks										
1. Objectives	Majors of women in Xeatzan Bajo have produced traditional Mayan women's blouses called Huipils by hand weaving. They have to purchase a small quantity of thread for Huipils by the higher price at retailers because their capital is quite limited, which results in increasing of production cost. In this project, initial investment of purchasing threads as revolving funds is given to the women's cooperative to be instituted. They cooperatively purchase cheaper threads at wholesale stores and can reduce production cost of Huipils to increase profit. In addition, various educational training will be performed for women to increase their capacity building.											
2. Number of Beneficiaries	200 women who are engaged in weaving Huipils in Xeatzan Bajo.											
3. Implementation Organization	Women's Huipils production cooperative for Xeatzan Bajo /JICA Study Team											
4. Project Contents												
1) Project Outline	<ol style="list-style-type: none"> 1) Establishment of production organization and control system of revolving fund 2) Provision of capital for revolving fund 3) Marketing survey conducted by NGO 4) Training program conducted by NGO (organization, management and accounting, general matters, gender, planning and evaluation) 5) Monitoring 											
2) Facility / Activity	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: center;">Facilities/Activities</th> <th style="text-align: center;">Implementator</th> </tr> </thead> <tbody> <tr> <td>1) Establishment of organization and revolving fund</td> <td>1) NGO</td> </tr> <tr> <td>2) Marketing survey</td> <td>2) NGO</td> </tr> <tr> <td>3) Training</td> <td>3) NGO</td> </tr> <tr> <td>4) Operation of organization (cooperative purchase of threads and selling them to the member of cooperative)</td> <td>4) Cooperative</td> </tr> </tbody> </table>	Facilities/Activities	Implementator	1) Establishment of organization and revolving fund	1) NGO	2) Marketing survey	2) NGO	3) Training	3) NGO	4) Operation of organization (cooperative purchase of threads and selling them to the member of cooperative)	4) Cooperative	
Facilities/Activities	Implementator											
1) Establishment of organization and revolving fund	1) NGO											
2) Marketing survey	2) NGO											
3) Training	3) NGO											
4) Operation of organization (cooperative purchase of threads and selling them to the member of cooperative)	4) Cooperative											
3) Organization for O&M	1) Women's Huipils production cooperative for Xeatzan Bajo											
4) Construction Period	<ol style="list-style-type: none"> 1) Establishment of cooperative: 1 month 2) Marketing survey: 1 month 3) Training: 4 months 											
5. Project Cost	<ol style="list-style-type: none"> 1) Initial capital for revolving fund: Q 86,620 2) Equipment and materials for cooperative office: Q 21,500 3) Project management including training, marketing survey, establishment of cooperative): Q 153,700 4) Total project cost: Q 261,820 											

6. Monitoring & Evaluation

Item	Frequency	Data collector	Aggregation	Decision Maker
1) Amount of thread that are sold and stocked in cooperative	Once a week	Cooperative	NGO	JICA Study Team
2) Financial statement	Once a week	Cooperative	NGO	JICA Study Team
3) Reduction of production cost	Once a month	Cooperative	NGO	JICA Study Team

7. Plan of Operation

Item	2001					2002												
	08	09	10	11	12	01	02	03	04	05	06	07	08	09	10	11	12	
1) Selection of NGO	■																	
2) Institution of Cooperative		■																
3) Marketing survey			■															
4) Training				■														
5) Investment of capital and purchase of threads						△												
6) Monitoring						■												

**PDM #07: Plan of Revolving Fund for Hand Weaving Thread (b-13)
(Pilot Project)**

Community: Xeatzan Bajo
Period: Sep. 2001 ~ Dec. 2002

Target Group: Women in the Village
Implt. Organization: JICA and Women's association

June, 2001

Narrative Summary	Verifiable Indicators	Means of Verification	Important Assumptions
<p>Overall Goal</p> <p>1. Poverty condition in central highland region will be mitigated.</p>	<p>1. Poverty indicator of rural area will be improved up to the provincial average by 2015.</p>	<p>1. FIS Poverty Indicator and monitoring on Farmers.</p>	<p>1. There will be no drastic change in development policy of Guatemalan Government.</p>
<p>Project Purpose</p> <p>1. Income of women in Xeatzan Bajo will be improved. 2. Women's capacity will be enhanced to improve socioeconomic situation.</p>	<p>1. Participant's income increase by 10 per cent</p>	<p>1 Record of weekly and monthly meeting (monitoring on members) 2 Record of the cooperative</p>	<p>1. Similar type of projects will be implemented in other neighboring communities with utilizing the monitoring results of this project.</p>
<p>Outputs</p> <p>1. Women's cooperative is established and in active. 2. Women buy thread at cheaper price from the cooperative. 3. Members master organizational and administrative skills and operate cooperative by themselves. 4. The cooperative continues joint purchase of thread 5. Members can sell their products at better price. 6. Members understanding on huipil business, alternative income generation activity is enhanced. 7. Members master basic management skill such as writing and reading, simple calculation.</p>	<p><i>By Nov 2002</i></p> <p>1. The production cost decrease by 15 %. 2. Amount of thread that are sold and stocked in cooperative. 3. Balance of cash flow</p>	<p>1. Monitoring on thread price at retailer and wholesaler. 2. Operation record of the cooperative for a accounting book and sale/ stock book</p>	<p>1. The price of thread and huipil do not change dramatically 2. The demand for huipil will not be deteriorated from the present level.</p>
<p>Activities</p> <p>1. Establishment of women's cooperative 2. Provision of thread to the cooperative as the initial input 3. Sale of thread by the cooperative to the members. 4. Joint purchase of thread through the cooperative 5. Training of members - Basic training for management (simple calculation, literacy training) - Huipil business (marketing, demand and perspective of huipil business) - Organization management (accounting, etc.) - Skill and information on alternative income generation activities.</p>	<p>Inputs</p> <p>1. Purchase cost of thread..... Q 86,620 2. Purchase cost for other initial inputs Q 21,500 3. Cost of training for members' capacitation and other management support..... Q 153,700 Total Cost: <u>Q 261,820</u></p>	<p>1. The consumption of thread in Xeatzan Bajo does not change drastically.</p>	<p>Pre-conditions</p>

PROJECT PROFILE

Project Name: Water Quality Improvement Plan for the Existing Drinking Water Supply (c-5)
 Community: Xeatzan Bajo

Item	Contents	Remarks																																																																																																														
1. Objectives	To improve health condition of the community residents through improvement of drinking water quality by installation of sterilizer.																																																																																																															
2. Number of Beneficiaries	Users of present potable water supply system 240 households (approximately 1,248 persons)																																																																																																															
3. Implementation Organization	Development Committee of Xeatzan Bajo																																																																																																															
4. Project Contents																																																																																																																
1) Project Outline	Sterilizer will be installed to the water tank and hypo chlorinate will be injected into the potable water in order to eliminate bacteria. People education will be conducted so that people use improved water continuously and pay necessary expense for the operation of sterilizer.																																																																																																															
2) Facility / Activity	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 50%;">Facilities/Activities</th> <th style="width: 50%;">Implementator</th> </tr> </thead> <tbody> <tr> <td>1) Hypo chlorinates Dispenser 1 unit</td> <td rowspan="2" style="text-align: center;">Contractor Development Committee (under the supervision of the study team)</td> </tr> <tr> <td>2) People education</td> </tr> </tbody> </table>	Facilities/Activities	Implementator	1) Hypo chlorinates Dispenser 1 unit	Contractor Development Committee (under the supervision of the study team)	2) People education																																																																																																										
Facilities/Activities	Implementator																																																																																																															
1) Hypo chlorinates Dispenser 1 unit	Contractor Development Committee (under the supervision of the study team)																																																																																																															
2) People education																																																																																																																
3) Organization for O&M	Development Committee and Pump Committee	Presently, development committee is in charge of water fee collection. This system will be utilized in this project.																																																																																																														
4) Construction Period	1 week (Period necessary for installation of sterilizer)																																																																																																															
5. Project Cost	1. Hypo chlorinates dispenser.....Q 9,220 2. Hypo chlorinate purchase cost..... Q 260 3. Other cost (Technical charge, etc.)Q 6,940 4. Total Installation Cost (1~3).....Q 16,420 5. Cost for education activity.....Q 2,500 6. Total CostQ 18,920	Purchase of hypo-chlorinate would be 3~4 times/year, because water use will be reduced during rainy season.																																																																																																														
6. Monitoring & Evaluation																																																																																																																
	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 20%;">Item</th> <th style="width: 15%;">Frequency</th> <th style="width: 20%;">Data collector</th> <th style="width: 20%;">Aggregation</th> <th style="width: 25%;">Decision Maker</th> </tr> </thead> <tbody> <tr> <td>1) Users of improved water</td> <td>Every 3 months</td> <td>Dev. Committee</td> <td>FIS</td> <td>Study Team</td> </tr> <tr> <td>2) Operation status of sterilizer</td> <td>Monthly</td> <td>Dev. Committee</td> <td>FIS</td> <td>Study Team</td> </tr> <tr> <td>3) Number of diarrhea patient</td> <td>Every 3 months</td> <td>Dev. Committee</td> <td>FIS</td> <td>Study Team</td> </tr> <tr> <td>4) Simple water quality test</td> <td>Every 3 months</td> <td>FIS</td> <td>FIS</td> <td>Study Team</td> </tr> </tbody> </table>	Item	Frequency	Data collector	Aggregation	Decision Maker	1) Users of improved water	Every 3 months	Dev. Committee	FIS	Study Team	2) Operation status of sterilizer	Monthly	Dev. Committee	FIS	Study Team	3) Number of diarrhea patient	Every 3 months	Dev. Committee	FIS	Study Team	4) Simple water quality test	Every 3 months	FIS	FIS	Study Team																																																																																						
Item	Frequency	Data collector	Aggregation	Decision Maker																																																																																																												
1) Users of improved water	Every 3 months	Dev. Committee	FIS	Study Team																																																																																																												
2) Operation status of sterilizer	Monthly	Dev. Committee	FIS	Study Team																																																																																																												
3) Number of diarrhea patient	Every 3 months	Dev. Committee	FIS	Study Team																																																																																																												
4) Simple water quality test	Every 3 months	FIS	FIS	Study Team																																																																																																												
7. Plan of Operation																																																																																																																
	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th rowspan="2" style="width: 20%;">Item</th> <th colspan="5" style="text-align: center;">2001</th> <th colspan="12" style="text-align: center;">2002</th> </tr> <tr> <th style="width: 3%;">08</th> <th style="width: 3%;">09</th> <th style="width: 3%;">10</th> <th style="width: 3%;">11</th> <th style="width: 3%;">12</th> <th style="width: 3%;">01</th> <th style="width: 3%;">02</th> <th style="width: 3%;">03</th> <th style="width: 3%;">04</th> <th style="width: 3%;">05</th> <th style="width: 3%;">06</th> <th style="width: 3%;">07</th> <th style="width: 3%;">08</th> <th style="width: 3%;">09</th> <th style="width: 3%;">10</th> <th style="width: 3%;">11</th> <th style="width: 3%;">12</th> </tr> </thead> <tbody> <tr> <td>1) Purchase of equipment</td> <td style="text-align: center;">■</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>2) Installation of sterilizer</td> <td></td> <td style="text-align: center;">■</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>3) People education</td> <td></td> <td style="text-align: center;">■</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>4) Monitoring</td> <td></td> <td></td> <td style="text-align: center;">△</td> <td style="text-align: center;">△</td> <td style="text-align: center;">△</td> <td style="text-align: center;">△</td> <td style="text-align: center;">△</td> <td style="text-align: center;">△</td> <td style="text-align: center;">△</td> <td style="text-align: center;">△</td> <td style="text-align: center;">△</td> <td style="text-align: center;">△</td> <td style="text-align: center;">△</td> <td style="text-align: center;">△</td> <td style="text-align: center;">△</td> <td style="text-align: center;">△</td> <td style="text-align: center;">△</td> </tr> </tbody> </table>	Item	2001					2002												08	09	10	11	12	01	02	03	04	05	06	07	08	09	10	11	12	1) Purchase of equipment	■																		2) Installation of sterilizer		■																	3) People education		■																	4) Monitoring			△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	
Item	2001					2002																																																																																																										
	08	09	10	11	12	01	02	03	04	05	06	07	08	09	10	11	12																																																																																															
1) Purchase of equipment	■																																																																																																															
2) Installation of sterilizer		■																																																																																																														
3) People education		■																																																																																																														
4) Monitoring			△	△	△	△	△	△	△	△	△	△	△	△	△	△	△																																																																																															

**PDM #10: Water Quality Improvement Plan for the Existing Drinking Water Supply System (c-5)
(Pilot Project)**

Community: Xeatzan Bajo
 Period: Sep. 2001 ~ Dec. 2002

Target Group: Beneficiaries of water supply system
 Implt. Organization: MAGA & Water Committee

June, 2001

Narrative Summary	Verifiable Indicators	Means of Verification	Important Assumptions
Overall Goal 1. Poverty condition in central highland region will be mitigated.	1. Poverty indicator of rural area will be improved up to the provincial average by 2015.	1. FIS Poverty Indicator and monitoring on Farmers.	1. There will be no drastic change in development policy of Guatemalan Government.
Project Purpose 1. Health condition of inhabitants in Xeatzan Bajo is improved.	1. Morbidity of water-borne diseases in Xeatzan Bajo is reduced.	1. Interview survey of potable water users. 2. Number of water-borne disease patients (such as diarrhea) in the health post.	1. Similar type of projects will be implemented in other communities by utilizing monitoring results of the project.
Outputs 1. Quality of potable water is improved. 2. Beneficiaries use improved potable water. 3. Sterilizer is properly maintained.	1. No colon bacillus is detected in potable water. 2. There is no reduction in the number of water user. 3. Sterilizer is constantly in operation.	1. Simple water quality test 2. Monitoring on potable water user 3. Number of operating days of sterilizer.	1. There is no chemical contamination occurs in potable water.
Activities 1. Education on use of improved water is made for beneficiaries through water committee. 2. Sterilize is installed to the water supply system. 3. O&M and fee collection of the sterilizer are made by water committee.	Inputs 1. Hypo chlorinates dispenser Q 9,220 2. Hypo chlorinate purchase cost Q 260 3. Other cost (Technical charge, etc.)..... Q 6,940 4. Total Installation Cost (1~3) Q 16,420 5. Cost for education activity Q 2,500 6. Total Cost <u>Q 18,920</u>	1. Installation of sterilizer is made with the consensus of community. 2. No disaster that damages water system occurs such as earthquake.	
		Pre-conditions 1. There is no strong objection to the installation of sterilizer.	

**PDM #17: Coffee Production Improvement Plan (b-7)
(Pilot Project)**

Community: Panyebar
Period: Sep. 2001 ~ Dec. 2002

Target Group: Coffee Producers in Panyebar
Implt. Organization: MAGA, Coffee growers' association

June, 2001

Narrative Summary	Verifiable Indicators	Means of Verification	Important Assumptions
Overall Goal 1. Poverty condition in central highland region will be mitigated.	1. Poverty indicator of rural area will be improved up to the provincial average by 2015.	1. FIS Poverty Indicator and monitoring on Farmers.	1. There will be no drastic change in development policy of Guatemalan Government.
Project Purpose 1. Income level of participants will be improved.	1. Income from coffee production will increase. 2. Production increases to 10~15 qq from present 7~10 qq.	1. Monitoring on farmers and interview survey. 2. Monitoring on farmers and interview survey.	1. Similar type of projects will be implemented in other neighboring communities with utilizing the monitoring results of this project.
Outputs 1. Coffee growers' association is in act. 2. Nursery is constructed, properly operated, and seedlings are distributed to the members. 3. Association members master proper coffee cultivation technique. 4. Association members master proper cultivation technique of cash crops like fruits. 5. Association members get knowledge and experiences regarding marketing of cash crops	1. Number of participants in Growers' association (over 70% of plan) and status of activities. 2. Number of produced seedlings and number of distributed seedlings (over 70% of plan). 3. Number of farmers who apply the introduced techniques (over 70% of plan). 4. Number of fruits seedlings sold (over 70% of production).	1. Number of registered participants of association and record of activities 2. Operation record of the nursery 3. Monitoring of farmers and interview survey 4. Monitoring of farmers and interview survey	1. There is no drastic reduction in demand and price of coffee. 2. There is no drastic reduction in demand and price of fruits.
Activities 1. Establishment of coffee growers' association 2. Construction of nursery bed 3. Technical training on the nursery operation 4. Technical training on coffee production (renovation of old tree, pest management, organic fertilizer, etc.) 5. Technical training of cultivation of cash crops likes, (avocado, etc.) 6. Technical training on commercial nursery for raising cash crops 7. Monitoring and evaluation of the project	Inputs 1. Construction cost of nursery bed Greenhouse (420 m ²) Greenhouse (375 m ²) Water Tank <u>Others</u> Q 89,051(A)		1. There is no outbreak of pests and diseases that may affect coffee production.
	2. Operational expenditures Seeds Consumables like plastic pot and etc. <u>Fertilizers, pesticides</u> Q 9,175 (B) 3. Seedling Coffee (2500 pcs) Avocado (500 pcs) Peach (300 pcs) Q 14,250(C) 4. Technical guidance Training on O/M of nursery bed <u>Training on increasing of coffee and fruits production</u> Q 15,600(D) Total Cost for project (A) + (B) + (C) + (D) = Q 128,076		Pre-conditions 1. There is no strong objection against the project among farmers.

PROJECT PROFILE

Project Name: Rehabilitation Plan for Drinking Water System (c-4)
 Community: Panyebar

Item	Contents	Remarks																																																																																																																																																
1. Objectives	To improve potable water supply system and																																																																																																																																																	
2. Number of Beneficiaries	Users of present potable water supply system 298 households																																																																																																																																																	
3. Implementation Organization	Water Committee of Panyebar																																																																																																																																																	
4. Project Contents																																																																																																																																																		
1) Project Outline	JICA supply construction materials for the improvement of the facilities at the point where the pipelines cross the river, and for the performance of the protection work at the steep slope for about 4 km starting from the source of the river.																																																																																																																																																	
2) Facility / Activity	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: center;">Facilities/Activities</th> <th style="text-align: center;">Implementator</th> </tr> </thead> <tbody> <tr> <td>1) River cross work</td> <td>7 points</td> </tr> <tr> <td>2) Protection work for pipeline</td> <td>2,400 m</td> </tr> <tr> <td>3) Distribution tank</td> <td>1 units</td> </tr> <tr> <td>4) Conveyance pipeline</td> <td>3 km</td> </tr> <tr> <td>5) Connection pipeline</td> <td>30 m</td> </tr> </tbody> </table>	Facilities/Activities	Implementator	1) River cross work	7 points	2) Protection work for pipeline	2,400 m	3) Distribution tank	1 units	4) Conveyance pipeline	3 km	5) Connection pipeline	30 m																																																																																																																																					
Facilities/Activities	Implementator																																																																																																																																																	
1) River cross work	7 points																																																																																																																																																	
2) Protection work for pipeline	2,400 m																																																																																																																																																	
3) Distribution tank	1 units																																																																																																																																																	
4) Conveyance pipeline	3 km																																																																																																																																																	
5) Connection pipeline	30 m																																																																																																																																																	
3) Organization for O&M	Water Committee																																																																																																																																																	
4) Construction Period	About 10 month																																																																																																																																																	
5. Project Cost	1. Rehabilitation Works 1) River cross work.....Q 25,290 2) Protection work for pipelineQ 287,760 3) Distribution tank.....Q 174,840 4) Conveyance pipeline.....Q 114,160 5) Connection pipelineQ 3,130 TOTALQ 605,180 2. Education of People.....Q 4,000 3. Total CostQ 609,180																																																																																																																																																	
6. Monitoring & Evaluation																																																																																																																																																		
	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: center;">Item</th> <th style="text-align: center;">Frequency</th> <th style="text-align: center;">Data collector</th> <th style="text-align: center;">Aggregation</th> <th style="text-align: center;">Decision Maker</th> </tr> </thead> <tbody> <tr> <td>1) Progress of construction of water supply</td> <td>Monthly</td> <td>Water Committee</td> <td>FIS</td> <td>Study Team</td> </tr> <tr> <td>2) Payment rate of water charge</td> <td>Every 4 months</td> <td>Water Committee</td> <td>FIS</td> <td>Study Team</td> </tr> <tr> <td>3) Status on O&M of facilities</td> <td>Once half year</td> <td>Water Committee</td> <td>FIS</td> <td>Study Team</td> </tr> <tr> <td>4) Status of water use</td> <td>Monthly</td> <td>Water Committee</td> <td>FIS</td> <td>Study Team</td> </tr> </tbody> </table>	Item	Frequency	Data collector	Aggregation	Decision Maker	1) Progress of construction of water supply	Monthly	Water Committee	FIS	Study Team	2) Payment rate of water charge	Every 4 months	Water Committee	FIS	Study Team	3) Status on O&M of facilities	Once half year	Water Committee	FIS	Study Team	4) Status of water use	Monthly	Water Committee	FIS	Study Team																																																																																																																								
Item	Frequency	Data collector	Aggregation	Decision Maker																																																																																																																																														
1) Progress of construction of water supply	Monthly	Water Committee	FIS	Study Team																																																																																																																																														
2) Payment rate of water charge	Every 4 months	Water Committee	FIS	Study Team																																																																																																																																														
3) Status on O&M of facilities	Once half year	Water Committee	FIS	Study Team																																																																																																																																														
4) Status of water use	Monthly	Water Committee	FIS	Study Team																																																																																																																																														
7. Plan of Operation																																																																																																																																																		
	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th rowspan="2" style="text-align: center;">Item</th> <th colspan="5" style="text-align: center;">2001</th> <th colspan="12" style="text-align: center;">2002</th> </tr> <tr> <th style="text-align: center;">08</th> <th style="text-align: center;">09</th> <th style="text-align: center;">10</th> <th style="text-align: center;">11</th> <th style="text-align: center;">12</th> <th style="text-align: center;">01</th> <th style="text-align: center;">02</th> <th style="text-align: center;">03</th> <th style="text-align: center;">04</th> <th style="text-align: center;">05</th> <th style="text-align: center;">06</th> <th style="text-align: center;">07</th> <th style="text-align: center;">08</th> <th style="text-align: center;">09</th> <th style="text-align: center;">10</th> <th style="text-align: center;">11</th> <th style="text-align: center;">12</th> </tr> </thead> <tbody> <tr> <td>1) Purchase of equipment</td> <td style="text-align: center;">■</td> <td style="text-align: center;">■</td> <td style="text-align: center;">■</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>2) River cross work</td> <td></td> <td></td> <td></td> <td style="text-align: center;">■</td> <td style="text-align: center;">■</td> <td style="text-align: center;">■</td> <td style="text-align: center;">■</td> <td style="text-align: center;">■</td> <td style="text-align: center;">■</td> <td style="text-align: center;">■</td> <td style="text-align: center;">■</td> <td style="text-align: center;">■</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>3) Protection work for pipeline</td> <td></td> <td></td> <td></td> <td style="text-align: center;">■</td> <td style="text-align: center;">■</td> <td style="text-align: center;">■</td> <td style="text-align: center;">■</td> <td style="text-align: center;">■</td> <td style="text-align: center;">■</td> <td style="text-align: center;">■</td> <td style="text-align: center;">■</td> <td style="text-align: center;">■</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>4) Distribution tank</td> <td></td> <td style="text-align: center;">■</td> <td style="text-align: center;">■</td> <td style="text-align: center;">■</td> <td style="text-align: center;">■</td> <td style="text-align: center;">■</td> <td style="text-align: center;">■</td> <td style="text-align: center;">■</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>5) Conduction pipeline/ Connection pipeline</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td style="text-align: center;">■</td> <td style="text-align: center;">■</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>6) Monitoring</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td style="text-align: center;">△</td> <td style="text-align: center;">△</td> <td style="text-align: center;">△</td> <td style="text-align: center;">△</td> <td style="text-align: center;">△</td> <td></td> </tr> </tbody> </table>	Item	2001					2002												08	09	10	11	12	01	02	03	04	05	06	07	08	09	10	11	12	1) Purchase of equipment	■	■	■																2) River cross work				■	■	■	■	■	■	■	■	■						3) Protection work for pipeline				■	■	■	■	■	■	■	■	■						4) Distribution tank		■	■	■	■	■	■	■										5) Conduction pipeline/ Connection pipeline							■	■										6) Monitoring												△	△	△	△	△		
Item	2001					2002																																																																																																																																												
	08	09	10	11	12	01	02	03	04	05	06	07	08	09	10	11	12																																																																																																																																	
1) Purchase of equipment	■	■	■																																																																																																																																															
2) River cross work				■	■	■	■	■	■	■	■	■																																																																																																																																						
3) Protection work for pipeline				■	■	■	■	■	■	■	■	■																																																																																																																																						
4) Distribution tank		■	■	■	■	■	■	■																																																																																																																																										
5) Conduction pipeline/ Connection pipeline							■	■																																																																																																																																										
6) Monitoring												△	△	△	△	△																																																																																																																																		

**PDM #21: Rehabilitation Plan for Drinking Water System (c-4)
(Pilot Project)**

Community: Panyebar
 Period: Sep. 2001 ~ Dec. 2002

Target Group: Beneficiaries of water supply system
 Implt. Organization: Water Committee

June, 2001

Narrative Summary	Verifiable Indicators	Means of Verification	Important Assumptions											
<p>Overall Goal</p> <p>1. Poverty condition in central highland region will be mitigated.</p>	<p>1. Poverty indicator of rural area will be improved up to the provincial average by 2015.</p>	<p>1. FIS Poverty Indicator and monitoring on Farmers.</p>	<p>1. There will be no drastic change in development policy of Guatemalan Government.</p>											
<p>Project Purpose</p> <p>1. Water will be always available at each house. 2. Time and energy spent for water collection will be reduced.</p>	<p>1. Water supply to each house will be stable. 2. Time spent for water collection per day or per week will be reduced.</p>	<p>1. Monitoring on water users.</p>	<p>1. Similar type of projects will be implemented in other communities by utilizing monitoring results of the project.</p>											
<p>Outputs</p> <p>1. Water system is improved. 2. Water charge is collected by the water committee. 3. Water system is properly maintained by the beneficiaries themselves. 4. Water is properly used at each house and saved.</p>	<p>1. Status of water system improvement. 2. Collection rate of water charge is more than 80%. 3. Maintenance condition of water supply system (collected water charge is properly used of maintenance purpose) 4. 5% of amount of water used at each house will be reduced.</p>	<p>1. Record of repair work 2. Record of water charge collection 3. Account record of water charge 4. Monitoring on beneficiaries.</p>	<p>1. Available water amount will not be reduced and water quality at water source will not be deteriorated.</p>											
<p>Activities</p> <p>1. Improvement of water supply system 2. Strengthening of water committee (improvement of water fee collection system) 3. Operation and maintenance of water supply system by the water users. 4. Training on water saving for the water users</p>	<p>Inputs</p> <p>1. Repair cost of water supply system</p> <table border="0"> <tr> <td>1) River cross work</td> <td>Q 25,290</td> </tr> <tr> <td>2) Protection work for pipeline</td> <td>Q 287,760</td> </tr> <tr> <td>3) Distribution tank</td> <td>Q 174,840</td> </tr> <tr> <td>4) Conveyance pipeline</td> <td>Q 114,160</td> </tr> <tr> <td>5) Connection pipeline</td> <td>Q 3,130</td> </tr> <tr> <td>TOTAL</td> <td>Q 605,180</td> </tr> </table> <p>2. Cost for training for water saving (Public meeting x 2 times & follow-up)..... Q 4,000 <u>Total: Q 609,180</u></p>	1) River cross work	Q 25,290	2) Protection work for pipeline	Q 287,760	3) Distribution tank	Q 174,840	4) Conveyance pipeline	Q 114,160	5) Connection pipeline	Q 3,130	TOTAL	Q 605,180	<p>1. There is no occurrence of natural disasters that damages water system drastically such as earthquake.</p> <p>Pre-conditions</p> <p>1. People have intention to participate in repair work of water system and are willing to pay water charge.</p>
1) River cross work	Q 25,290													
2) Protection work for pipeline	Q 287,760													
3) Distribution tank	Q 174,840													
4) Conveyance pipeline	Q 114,160													
5) Connection pipeline	Q 3,130													
TOTAL	Q 605,180													

PROJECT PROFILE

Project Name: Water Quality Improvement Plan for the Existing Drinking Water Supply (c-5)
 Community: Panyebar

Item	Contents	Remarks																																																																																																														
1. Objectives	To improve health condition of the community residents through improvement of drinking water quality by installation of sterilizer.																																																																																																															
2. Number of Beneficiaries	Users of present potable water supply system 298 households (approximately 1,730 persons)																																																																																																															
3. Implementation Organization	Water Committee																																																																																																															
4. Project Contents																																																																																																																
1) Project Outline	Sterilizer will be installed to the water tank and hypo chlorinate will be injected into the potable water in order to eliminate bacteria. People education will be conducted so that people use improved water continuously and pay necessary expense for the operation of sterilizer.																																																																																																															
2) Facility / Activity	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: center;">Facilities/Activities</th> <th style="text-align: center;">Implementator</th> </tr> </thead> <tbody> <tr> <td>1) Hypochlorinate Dosing 2 unit</td> <td rowspan="2" style="text-align: center;">Contractor Water Committee (under the supervision of the study team)</td> </tr> <tr> <td>2) People education</td> </tr> </tbody> </table>	Facilities/Activities	Implementator	1) Hypochlorinate Dosing 2 unit	Contractor Water Committee (under the supervision of the study team)	2) People education																																																																																																										
Facilities/Activities	Implementator																																																																																																															
1) Hypochlorinate Dosing 2 unit	Contractor Water Committee (under the supervision of the study team)																																																																																																															
2) People education																																																																																																																
3) Organization for O&M	Water Committee																																																																																																															
4) Construction Period	1 week (Period necessary for installation of sterilizer)																																																																																																															
5. Project Cost	1. Hypochlorinate dosing 2 sets.....Q 18,440 2. Hypochlorinate purchase cost.....Q 1,030 3. Other cost (Technical charge, etc.)Q 13,880 4. Total installation cost (1~3).....Q 33,350 5. Cost for education activity.....Q 2,500 6. Total CostQ 35,850																																																																																																															
6. Monitoring & Evaluation																																																																																																																
	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: center;">Item</th> <th style="text-align: center;">Frequency</th> <th style="text-align: center;">Data collector</th> <th style="text-align: center;">Aggregation</th> <th style="text-align: center;">Decision Maker</th> </tr> </thead> <tbody> <tr> <td>1) Users of improved water</td> <td>Every 3 months</td> <td>Dev. Committee</td> <td>FIS</td> <td>Study Team</td> </tr> <tr> <td>2) Operation status of sterilizer</td> <td>Monthly</td> <td>Dev. Committee</td> <td>FIS</td> <td>Study Team</td> </tr> <tr> <td>3) Number of diarrhea patient</td> <td>Every 3 months</td> <td>Dev. Committee</td> <td>FIS</td> <td>Study Team</td> </tr> <tr> <td>4) Simple water quality test</td> <td>Every 3 months</td> <td>FIS</td> <td>FIS</td> <td>Study Team</td> </tr> </tbody> </table>	Item	Frequency	Data collector	Aggregation	Decision Maker	1) Users of improved water	Every 3 months	Dev. Committee	FIS	Study Team	2) Operation status of sterilizer	Monthly	Dev. Committee	FIS	Study Team	3) Number of diarrhea patient	Every 3 months	Dev. Committee	FIS	Study Team	4) Simple water quality test	Every 3 months	FIS	FIS	Study Team																																																																																						
Item	Frequency	Data collector	Aggregation	Decision Maker																																																																																																												
1) Users of improved water	Every 3 months	Dev. Committee	FIS	Study Team																																																																																																												
2) Operation status of sterilizer	Monthly	Dev. Committee	FIS	Study Team																																																																																																												
3) Number of diarrhea patient	Every 3 months	Dev. Committee	FIS	Study Team																																																																																																												
4) Simple water quality test	Every 3 months	FIS	FIS	Study Team																																																																																																												
7. Plan of Operation																																																																																																																
	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th rowspan="2" style="text-align: center;">Item</th> <th colspan="5" style="text-align: center;">2001</th> <th colspan="12" style="text-align: center;">2002</th> </tr> <tr> <th style="text-align: center;">08</th> <th style="text-align: center;">09</th> <th style="text-align: center;">10</th> <th style="text-align: center;">11</th> <th style="text-align: center;">12</th> <th style="text-align: center;">01</th> <th style="text-align: center;">02</th> <th style="text-align: center;">03</th> <th style="text-align: center;">04</th> <th style="text-align: center;">05</th> <th style="text-align: center;">06</th> <th style="text-align: center;">07</th> <th style="text-align: center;">08</th> <th style="text-align: center;">09</th> <th style="text-align: center;">10</th> <th style="text-align: center;">11</th> <th style="text-align: center;">12</th> </tr> </thead> <tbody> <tr> <td>1) Purchase of equipment</td> <td style="text-align: center;">■</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>2) Installation of sterilizer</td> <td></td> <td style="text-align: center;">■</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>3) People education</td> <td></td> <td style="text-align: center;">■</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>4) Monitoring</td> <td></td> <td></td> <td style="text-align: center;">△</td> <td style="text-align: center;">△</td> <td style="text-align: center;">△</td> <td style="text-align: center;">△</td> <td style="text-align: center;">△</td> <td style="text-align: center;">△</td> <td style="text-align: center;">△</td> <td style="text-align: center;">△</td> <td style="text-align: center;">△</td> <td style="text-align: center;">△</td> <td style="text-align: center;">△</td> <td style="text-align: center;">△</td> <td style="text-align: center;">△</td> <td style="text-align: center;">△</td> <td style="text-align: center;">△</td> </tr> </tbody> </table>	Item	2001					2002												08	09	10	11	12	01	02	03	04	05	06	07	08	09	10	11	12	1) Purchase of equipment	■																		2) Installation of sterilizer		■																	3) People education		■																	4) Monitoring			△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	
Item	2001					2002																																																																																																										
	08	09	10	11	12	01	02	03	04	05	06	07	08	09	10	11	12																																																																																															
1) Purchase of equipment	■																																																																																																															
2) Installation of sterilizer		■																																																																																																														
3) People education		■																																																																																																														
4) Monitoring			△	△	△	△	△	△	△	△	△	△	△	△	△	△	△																																																																																															

**PDM #22: Water Quality Improvement Plan for the Existing Drinking Water Supply System (c-5)
(Pilot Project)**

Community: Panyebar
 Period: Sep. 2001 ~ Dec. 2002

Target Group: Beneficiaries of water supply system
 Implt. Organization: Water Committee

June, 2001

Narrative Summary	Verifiable Indicators	Means of Verification	Important Assumptions
<p>Overall Goal</p> <p>1. Poverty condition in central highland region will be mitigated.</p>	<p>1. Poverty indicator of rural area will be improved up to the provincial average by 2015.</p>	<p>1. FIS Poverty Indicator and monitoring on Farmers.</p>	<p>1. There will be no drastic change in development policy of Guatemalan Government.</p>
<p>Project Purpose</p> <p>1. Health condition of inhabitants in Panyebar is improved.</p>	<p>1. Morbidity of water-borne diseases in Panyebar is reduced.</p>	<p>1. Interview survey of potable water users. 2. Number of water-borne disease patients (such as diarrhea) in the health post.</p>	<p>1. Similar type of projects will be implemented in other communities by utilizing monitoring results of the project.</p>
<p>Outputs</p> <p>1. Quality of potable water is improved. 2. Beneficiaries use improved potable water. 3. Sterilizer is properly maintained.</p>	<p>1. No colon bacillus is detected in potable water. 2. There is no reduction in the number of water user. 3. Sterilizer is constantly in operation.</p>	<p>1. Simple water quality test 2. Monitoring on potable water user 3. Number of operating days of sterilizer.</p>	<p>1. There is no chemical contamination occurs in potable water.</p>
<p>Activities</p> <p>1. Education on use of improved water is made for beneficiaries through water committee. 2. Sterilizer is installed to the water supply system. 3. O&M and fee collection of the sterilizer are made by water committee.</p>	<p>Inputs</p> <p>1. Hypochlorinate dosing: 2 sets Q 18,440 2. Hypochlorinate purchase cost Q 1,030 3. Other cost (Technical charge, etc.) Q 13,880 4. Total installation cost (1~3) Q 33,350 5. Cost for education activity Q 2,500 6. Total Cost <u>Q 35,850</u></p>	<p>1. Installation of sterilizer is made with the consensus of community. 2. No disaster that damages water system occurs such as earthquake.</p>	
			<p>Pre-conditions</p> <p>1. There is no strong objection to the installation of sterilizer.</p>

PROJECT PROFILE

Project Name: Coffee Processing Plan for Workload Reduction in the Mountainous Area (c-14)
Community: Panyebar

Item	Contents	Remarks																
1. Objectives	The main objective of the project is to reduce the workload of farmers who carry coffee beans walking through very steep slopes. Additional project benefits are: i) increase of farmers' net income; ii) reduction of pollution of Atitlan lake waters; iii) availability of organic matter for composting.																	
2. Number of Beneficiaries	80 small coffee farmers	Farmers having more than 1 ha of coffee area are excluded as direct project beneficiary.																
3. Implementation Organization	Development committee of Panyebar																	
4. Project Contents																		
1) Project Outline	Four groups of small coffee farmers are formed considering the location of their farm plots. The groups are integrated by 15 to 25 coffee farmers. Coffee pulping machines will be installed in selected sites near by the farms of each group. The cost of machines is born by the project. Each farmer will pulp and manage individually its own harvested coffee.																	
2) Facility / Activity	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 60%;"><i>Facilities/Activities</i></th> <th style="width: 40%;"><i>Implementator</i></th> </tr> </thead> <tbody> <tr> <td>1) Purchasing pulping machines</td> <td>Study team</td> </tr> <tr> <td>2) Confirmation of installation sites</td> <td>Development committee</td> </tr> <tr> <td>3) Installation of pulping machines</td> <td>Development committee</td> </tr> <tr> <td>4) Acquisition of drums and plastic sheets</td> <td>Each farmer, by itself</td> </tr> </tbody> </table>	<i>Facilities/Activities</i>	<i>Implementator</i>	1) Purchasing pulping machines	Study team	2) Confirmation of installation sites	Development committee	3) Installation of pulping machines	Development committee	4) Acquisition of drums and plastic sheets	Each farmer, by itself	Assisted by Study team						
<i>Facilities/Activities</i>	<i>Implementator</i>																	
1) Purchasing pulping machines	Study team																	
2) Confirmation of installation sites	Development committee																	
3) Installation of pulping machines	Development committee																	
4) Acquisition of drums and plastic sheets	Each farmer, by itself																	
3) Organization for O&M	Each group of small coffee farmer will prepare its own schedule for using and maintaining the pulping machines.																	
4) Construction period	One month, November 2001																	
5. Project Cost	<table style="width: 100%;"> <tbody> <tr> <td>1) 6 units for pulping manually at 8,470 Quetzals;</td> <td style="text-align: right;">Sub-total = Q 50,820</td> </tr> <tr> <td>2) Construct. 4 protection houses for pulping machines at 3,000 Quetzals per house;</td> <td style="text-align: right;">Sub-total = Q 12,000</td> </tr> <tr> <td>3) Purchase of 1 weighing scales at 2,300 Quetzal;</td> <td style="text-align: right;">Sub-total = Q 2,300</td> </tr> <tr> <td>4) Vinyl for drying coffee;</td> <td style="text-align: right;">Sub-total = Q 2,000</td> </tr> <tr> <td>5) Purchase of 50 plastic drums for fermentation;</td> <td style="text-align: right;">Sub-total = Q 6,250</td> </tr> <tr> <td>6) Training activities;</td> <td style="text-align: right;">Sub-total = Q 2,000</td> </tr> <tr> <td style="text-align: right;">Total Project Cost = Q 75,370</td> <td></td> </tr> </tbody> </table>	1) 6 units for pulping manually at 8,470 Quetzals;	Sub-total = Q 50,820	2) Construct. 4 protection houses for pulping machines at 3,000 Quetzals per house;	Sub-total = Q 12,000	3) Purchase of 1 weighing scales at 2,300 Quetzal;	Sub-total = Q 2,300	4) Vinyl for drying coffee;	Sub-total = Q 2,000	5) Purchase of 50 plastic drums for fermentation;	Sub-total = Q 6,250	6) Training activities;	Sub-total = Q 2,000	Total Project Cost = Q 75,370		The project will provide plastic drums and vinyl sheets to the 50 farmers with smaller land areas. 30 farmers with larger land are should acquire their own fermentation drums and drying sheets.		
1) 6 units for pulping manually at 8,470 Quetzals;	Sub-total = Q 50,820																	
2) Construct. 4 protection houses for pulping machines at 3,000 Quetzals per house;	Sub-total = Q 12,000																	
3) Purchase of 1 weighing scales at 2,300 Quetzal;	Sub-total = Q 2,300																	
4) Vinyl for drying coffee;	Sub-total = Q 2,000																	
5) Purchase of 50 plastic drums for fermentation;	Sub-total = Q 6,250																	
6) Training activities;	Sub-total = Q 2,000																	
Total Project Cost = Q 75,370																		
6. Monitoring & Evaluation																		
<i>Item</i>	<i>Frequency</i>	<i>Data collector</i>	<i>Aggregation</i>	<i>Decision Maker</i>														
1) Installat. pulping machines	Weekly	Devel. committee	MAGA	Study Team														
2) Operation of pulping	Weekly	Devel. committee	MAGA	Study Team														
3) Reduction of coffee beans	Monthly	Devel. committee	MAGA	Study Team														
4) Price of coffee	Monthly	Devel. committee	MAGA	Study Team														
7. Plan of Operation																		
<i>Item</i>	<i>2001</i>					<i>2002</i>												
	08	09	10	11	12	01	02	03	04	05	06	07	08	09	10	11	12	
1) Ordering of Machines	■																	
2) Installation of facilities			■	■	■													
3) Training Activity				■	■	■												
4) Monitoring				△	△	△	△									△	△	

**PDM #25: Coffee Processing Plan for Workload Reduction in Mountainous Area (c-14)
(Pilot Project)**

Community: Panyebar	Target Group: 80 Coffee Farmers of Panyebar
Period: Sep. 2001 ~ Dec. 2002	Imp. Organization: Farmers Coop-MAGA-ANACAFE-INTECAP

June, 2001

Narrative Summary	Verifiable Indicators	Means of Verification	Important Assumptions
<p>Overall Goal</p> <p>1. Poverty condition in central highland region will be mitigated.</p>	<p>1. Poverty indicator of rural area will be improved up to the provincial average by 2015.</p>	<p>1. FIS Poverty Indicator and monitoring on Farmers.</p>	<p>1. There will be no drastic change in development policy of Guatemalan Government.</p>
<p>Project Purpose</p> <p>1. Workload of coffee farmers at harvesting time will be reduced.</p> <p>2. Income level of small coffee farmers will be improved.</p> <p>3. Job opportunities will be created in Panyebar Model Project Area.</p>	<p>1. Time consumption for transporting the harvested coffee will be reduced</p> <p>2. The income level of beneficiary farmers will increase about 10 %.</p> <p>3. Number of labors employed for depulping.</p>	<p>1. Monitoring and interview survey.</p> <p>2. Monitoring production costs and selling prices of dry and fresh coffee beans.</p> <p>3. Monitoring of employed farmers.</p>	<p>1. Similar type of projects will be implemented in other neighboring communities with utilizing the monitoring results of this project.</p>
<p>Outputs</p> <p>1. Coffee producers are organized into 4 groups of 15 to 25 farmers each and the groups are in action.</p> <p>2. Coffee beans are processed into depulped and dry coffee beans nearby farms site.</p> <p>3. The weight of coffee to be transported is reduced compared with fresh beans.</p> <p>4. Coffee farmers sell dried coffee bean with added value.</p> <p>5. Organic materials for compost production become available.</p>	<p>1. Number of groups organized and their member</p> <p>2. About 4,800 quintals of coffee beans are depulped and dried up every year by 80 beneficiary farmers (over 80% of raw coffee production).</p> <p>3. The weight of coffee is reduced to 1/5.</p> <p>4. The price will be higher by 10 % compared with the price of fresh beans.</p> <p>5. Number of farmers who apply organic matter from depulping.</p>	<p>1. Monitoring on membership of the organized coffee farmers groups.</p> <p>2. Monitoring on depulped coffee.</p> <p>3. Monitoring of the weight of depulped coffee.</p> <p>4. Monitoring on coffee sale of group members.</p> <p>5. Monitoring on farmers.</p>	<p>1. Demand and prices of coffee will not decrease greatly and farmers continue producing coffee.</p>
<p>Activities</p> <p>1. Selection of 80 coffee farmers and Organizing 5 groups for coffee pulping.</p> <p>2. Deciding on sites for installing coffee pulping and drying facilities.</p> <p>3. Installation of 6 Manual Coffee Pulping Machines.</p> <p>4. Provision of vinyl sheets for drying coffee.</p> <p>5. Training members of coffee pulping groups.</p> <p>6. Contact markets outlets for selling dry coffee beans.</p>	<p>Inputs</p> <p>1. Technical assistance fee for organizing coffee processing groups: Q 20,550</p> <p>2. Purchase and Installation of 6 units of Manual Coffee Pulping Machines (max. capacity: 35 qq/hour) Q 8,470 x 6 units = Q 50,820</p> <p>3. Cost of coffee drying vinyl sheets: Q 2,000</p> <p>4. About 10 Man-days of INTECAP and ANACAFE specialists for training coffee farmers on management of depulping and drying activities: Q 2,000</p> <p>5. Total Cost: <u>Q 75,370</u></p>	<p>1. There is no occurrence of natural disaster that damages the facilities.</p>	<p>Pre-conditions</p> <p>1. Coffee farmers cooperate in providing the land area for the project and in providing free labor for the necessary project works.</p>

PROJECT PROFILE

Project Name: Reforestation Plan (a-3)

Community: Pachum

Item	Contents	Remarks																		
1. Objectives	To promote soil conservation in steep farmlands and plantation in forest areas by construction of nurseries and implementation of training related to soil conservation in order that local people will be able to conserve environment in the area by himself.																			
2. Number of Beneficiaries	Plantation in community area: 150 households (about 900 persons) Plantation in private area: 48 households (about 290 persons)																			
3. Implementation Organization	Plantation Committee of Pachum																			
4. Project Contents																				
1) Project Outline	Facilities of nursery will be installed and managed, and plantation will be promoted for forest and soil conservation. Training will be implemented for local people to make him acquire basic techniques concerned with seedling production and plantation. Environmental education and study tours will be done for local people to enhance his understanding on environmental conservation.																			
2) Facility / Activity	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: center;">Facilities/Activities</th> <th style="text-align: center;">Implementator</th> </tr> </thead> <tbody> <tr> <td>1) Facilities of nursery 2 units</td> <td rowspan="4" style="vertical-align: top;">Plantation Committee (under the supervision of consignee organization)</td> </tr> <tr> <td>2) Storage 2 units</td> </tr> <tr> <td>3) Activities of seedling production and plantation</td> </tr> <tr> <td>4) Training</td> </tr> </tbody> </table>	Facilities/Activities	Implementator	1) Facilities of nursery 2 units	Plantation Committee (under the supervision of consignee organization)	2) Storage 2 units	3) Activities of seedling production and plantation	4) Training	The study team and MAGA Totonicapán have to confer with consignee organization about details of activities.											
Facilities/Activities	Implementator																			
1) Facilities of nursery 2 units	Plantation Committee (under the supervision of consignee organization)																			
2) Storage 2 units																				
3) Activities of seedling production and plantation																				
4) Training																				
3) Organization for O&M	Plantation Committee (The committee must be under guidance of consignee organization about fund management of nursery.)																			
4) Construction Period	1) Nursery construction 1 week 2) Storage construction 1 week																			
5. Project Cost	<table style="width: 100%; border-collapse: collapse;"> <tbody> <tr> <td>1) Nursery construction and management.....</td> <td style="text-align: right;">Q</td> <td style="text-align: right;">38,307</td> </tr> <tr> <td>2) Storage construction</td> <td style="text-align: right;">Q</td> <td style="text-align: right;">7,351</td> </tr> <tr> <td>3) Plantation tools</td> <td style="text-align: right;">Q</td> <td style="text-align: right;">3,538</td> </tr> <tr> <td>4) Cost for training.....</td> <td style="text-align: right;">Q</td> <td style="text-align: right;">86,588</td> </tr> <tr> <td>5) Transportation.....</td> <td style="text-align: right;">Q</td> <td style="text-align: right;">4,920</td> </tr> <tr> <td style="text-align: right;">Total</td> <td style="text-align: right;">Q</td> <td style="text-align: right;">140,704</td> </tr> </tbody> </table>	1) Nursery construction and management.....	Q	38,307	2) Storage construction	Q	7,351	3) Plantation tools	Q	3,538	4) Cost for training.....	Q	86,588	5) Transportation.....	Q	4,920	Total	Q	140,704	
1) Nursery construction and management.....	Q	38,307																		
2) Storage construction	Q	7,351																		
3) Plantation tools	Q	3,538																		
4) Cost for training.....	Q	86,588																		
5) Transportation.....	Q	4,920																		
Total	Q	140,704																		
6. Monitoring & Evaluation																				
	<i>Item</i>	<i>Frequency</i>	<i>Data collector</i>	<i>Aggregation</i>	<i>Decision Maker</i>															
	1) Number of seedling production	Every 3 months	Pla. Committee	MAGA	Study Team															
	2) Number of plantation	1 time (August)	Pla. Committee	MAGA	Study Team															
	3) Number of participant on training and activities	Every 3 months	Pla. Committee	MAGA	Study Team															
7. Plan of Operation																				
	<i>Item</i>	2001					2002													
		08	09	10	11	12	01	02	03	04	05	06	07	08	09	10	11	12		
	1) Purchase of equipment	■																		
	2) Seedling raising		■	■	■	■					■	■	■			■	■			
	3) Forestation									■	■	■								
	4) Training		△		△			△		△		△		△			△			
	5) Monitoring				△			△			△			△			△			

PDM #28: Reforestation Plan (a-3)

Community: Pachum	Target Group: Village people
Period: Sep. 2001 ~ Dec. 2002	Implt. Organization: Plantation Committee / MAGA

June 2001

Narrative Summary	Verifiable Indicators	Means of Verification	Important Assumptions
<p>Overall Goal</p> <p>1. Poverty condition in central highland region will be mitigated.</p>	<p>1. Poverty indicator of rural area will be improved up to the provincial average by 2015.</p>	<p>1. FIS Poverty Indicator and monitoring on Farmers.</p>	<p>1. There will be no drastic change in development policy of Guatemalan Government.</p>
<p>Project Purpose</p> <p>1. Farmlands and forest are improved. 2. People's income increases through promotion of agro-forestry and fruit plantation.</p>	<p>1. The condition of farmlands is improved. 2. Farmer's income increases.</p>	<p>1. Number of plantation 2. Interview with farmers.</p>	<p>1. Similar type of projects will be implemented in other communities by utilizing monitoring results of the project.</p>
<p>Outputs</p> <p>1. Plantation is managed. 2. Effectual trees for the improvement of farmlands' condition are planted. 3. Agro-forestry effectual for increase of harvest is implemented. 4. Fruit trees (peach and avocado) are introduced as cashing crop. 5. Plantation of watershed protection is implemented. 6. Plantation for firewood is implemented. 7. Tools to continue the plantation are secured for local people. 8. People's understanding on forest management is enhanced through training.</p>	<p>1. 4,000 seedlings are produced. 2. Farmlands where effectual trees are applied for improvement of soil condition increase. 3. 98 cuerdas of farmland area of agro-forestry increase. 4. 700 fruit trees increases. 5. Area of plantation spreads in areas of the water source. 6. Area of plantation for fuel woods spreads. 7. Facilities of nursery are constructed in each sector. 8. 80 % of participants in the project benefit from training and participate on forestation activities. 9. Environmental education is implemented in class of primary school.</p>	<p>1. Implementation records of nursery 2. Plantation records 3. Interview with farmers and Plantation records 4. Interview with farmers and Plantation records 5. Water survey in dry season. 6. Plantation records 7. Number of nursery 8. Number of participants in training and forestation activities 9. Hours of classes about environmental education in primary school.</p>	<p>1. There is no drastic change in demand for forestry products. 2. There is no problem for water right within peoples. 3. Earthquakes or abnormal climate don't prevent from growth of trees after the plantation. 4. Farming techniques which bring about soil erosion in inclined land are not applied 5. Trees are not felled any more illegally. 6. Depopulation of the community is not accelerated.</p>
<p>Activities</p> <p>1. Nursery construction 2. Promotion of agro-forestry 3. Fruit plantation 4. Plantation for soil conservation. 5. Plantation for watershed protection. 6. Plantation for fuel wood securing. 7. Making compost. 8. Training for people related to plantation. 9. Study tour to advanced areas. 10. Implementation of environmental education.</p>	<p>Inputs</p> <p>1. Cost for nursery managementQ 38,307 - Seedlings production - Nursery construction - Purchase cost of seedlings, seeds and farming tools 2. Storage construction.....Q 7,351 3. Plantation tools.....Q 3,538 4. Training.....Q 78,000 5. Study tour.....Q 8,588 6. TransportationQ 4,920 <u>Total cost: Q 140,704</u></p>	<p>1. Land condition does not deteriorate more than present condition by the earthquake and abnormal weather.</p>	<p>Pre-conditions</p> <p>1. The technical cooperation by MAGA will be continued. 2. Security condition surrounding the target community does not deteriorate more than present.</p>

PROJECT PROFILE

Project Name: Layer-Chicken Raising Plan for Women's Group (b-6)
 Community: Pachum

Item	Contents	Remarks															
1. Objectives	Group of village women shall engage in the raising chickens for laying eggs for sales locally. The money earned by the sales shall be reserved as a revolving fund for next raising. The scale of business shall be increased step by step. Thus, increase of income, promotion of village industry and improvement of nutritious condition in village people are expected.																
2. Number of Beneficiaries	150 family, about 900 people																
3. Implementation Organization	Women's Group																
4. Project Contents																	
1) Project Outline	1) Provide input materials: young chicken, feed, medicine and vitamin 2) Construct hen house using materials granted by project 3) Open training course for modern chicken raising practices 4) Collect eggs and sale to local market in group activities 5) Save the fund for establishing next generation																
2) Facility / Activity	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 50%;">Facilities/Activities</th> <th style="width: 50%;">Implementator</th> </tr> </thead> <tbody> <tr> <td>1) Hen-house (5x3m) 4 units</td> <td>Beneficiaries</td> </tr> <tr> <td>2) Training on raising technique</td> <td>NGO or MAGA</td> </tr> </tbody> </table>	Facilities/Activities	Implementator	1) Hen-house (5x3m) 4 units	Beneficiaries	2) Training on raising technique	NGO or MAGA										
Facilities/Activities	Implementator																
1) Hen-house (5x3m) 4 units	Beneficiaries																
2) Training on raising technique	NGO or MAGA																
3) Organization for O&M	Women's Group																
4) Construction Period	One month																
5. Project Cost	1) input materials: Q 38,808 2) hen house materials: Q 5,832 3) various training:..... Q 22,100 4) silo construction Q 4,100 5) others:..... Q 2,065 6) Total project cost Q 73,082	Cost born by beneficiaries: Q 2,600															
6. Monitoring & Evaluation																	
<i>Item</i>	<i>Frequency</i>	<i>Data collector</i>	<i>Aggregation</i>	<i>Decision Maker</i>													
1) Raising condition (mortality, rate of laying egg)	Every 3 month	Women's group	MAGA	Study Team													
2) Sales of eggs, saving money of egg sales	Every 3 month	Women's group	MAGA	Study Team													
7. Plan of Operation																	
<i>Item</i>	<i>2001</i>					<i>2002</i>											
	08	09	10	11	12	01	02	03	04	05	06	07	08	09	10	11	12
1) Preparing input materials																	
2) Construction hen-houses																	
3) Starting raising																	
4) Evaluation					△			△			△			△			△

**PDM #31: Layer-chicken Raising Plan for Women's Group (b-6)
(Pilot Project)**

Community: Pachum
Period: Sep. 2001 ~ Dec. 2002

Target Group: Women's group with 20 members
Implt. Organization: MAGA & Women's Group

June, 2001

Narrative Summary	Verifiable Indicators	Means of Verification	Important Assumptions
<p>Overall Goal</p> <p>1. Poverty condition in central highland region will be mitigated.</p>	<p>1. Poverty indicator of rural area will be improved up to the provincial average by 2015.</p>	<p>1. FIS Poverty Indicator and monitoring on Farmers.</p>	<p>1. There will be no drastic change in development policy of Guatemalan Government.</p>
<p>Project Purpose</p> <p>1. Income level of the beneficiaries will be improved. 2. Women's status will be improved within the community.</p>	<p>1. Q 5.0/day will be paid constantly to labors. 2. Women's participation in socio-economic activities will increase.</p>	<p>1. Account book of women's group 2. Monitoring on number of women who participate in any village activities or committees as permanent staff.</p>	<p>1. Similar type of projects will be implemented in other neighboring communities with utilizing the monitoring results of this project.</p>
<p>Outputs</p> <p>1. Women's group is in action. 2. Participants will master raising technique and practice chicken raising. 3. Eggs and old chickens are jointly sold.</p>	<p>1. About 200 chickens (50 chickens/group) are raised by 4 groups. 2. 160 eggs are produced and sell in local market daily. 3. Participants in the project increase.</p>	<p>1. Activity report of the women's group 2. Interview survey to the beneficiaries 3. Number of members of the women's group</p>	<p>1. There is no drastic change in demand for eggs within the surrounding area. 2. There is no drastic decrease in egg price.</p>
<p>Activities</p> <p>1. Establishment of women's group (4 groups with 10 members each) 2. Joint purchase of young layer-chicken 3. Raising of layer-chicken and provision of technical assistance 4. Selling of egg and old chicken in and around the community. 5. Monitoring and evaluation of the project</p>	<p>Inputs</p> <p>1. Young chicken, feed, other inputs Q 38,808 2. Material for chicken house Q 5,832 3. Silo construction Q 4,100 4. Training Q 22,100 5. Others Q 2,065 Total <u>Q 73,082</u></p> <p>6. Labor cost born by beneficiaries Q 2,600</p>	<p>1. There is no unusual outbreak of diseases (New Castle Disease, etc.).</p> <p>Pre-conditions</p> <p>1. There is no strong objection to the project or conflict among the community people.</p>	

PROJECT PROFILE

Project Name: Water Quality Improvement Plan for the Existing Drinking Water Supply (c-5)
 Community: Pachum

Item	Contents	Remarks															
1. Objectives	To improve health condition of the community residents through improvement of drinking water quality by installation of sterilizer.																
2. Number of Beneficiaries	Users of present potable water supply system System 1: 70 houses (about 360 persons) System 2: 51 houses (about 260 persons)																
3. Implementation Organization	Water Committee																
4. Project Contents																	
1) Project Outline	Sterilizer will be installed to the water tank and hypo chlorinate will be injected into the potable water in order to eliminate bacteria. People education will be conducted so that people use improved water continuously and pay necessary expense for the operation of sterilizer.																
2) Facility / Activity	<i>Facilities/Activities</i>	<i>Implementator</i>															
	1) Hypo chlorinates Dispenser 2 unit 2) People education	Contractor Water Committee (under the supervision of the study team)															
3) Organization for O&M	Water Committee																
4) Construction Period	1 week (Period necessary for installation of sterilizer)																
5. Project Cost	1. Hypo chlorinates dispenser 2 setsQ 18,440 2. Hypo chlorinate purchase cost.....Q 1,030 3. Distribution tank 2 unitsQ 193,860 4. Other cost (Technical charge, etc.)Q 13,880 5. Total installation cost (1~4).....Q 227,210 6. Cost for education activity.....Q 4,000 7. Total CostQ 231,210																
6. Monitoring & Evaluation																	
<i>Item</i>	<i>Frequency</i>	<i>Data collector</i>	<i>Aggregation</i>	<i>Decision Maker</i>													
1) Users of improved water	Every 3 months	Dev. Committee	FIS	Study Team													
2) Operation status of sterilizer	Monthly	Dev. Committee	FIS	Study Team													
3) Number of diarrhea patient	Every 3 months	Dev. Committee	FIS	Study Team													
4) Simple water quality test	Every 3 months	FIS	FIS	Study Team													
7. Plan of Operation																	
<i>Item</i>	<i>2001</i>					<i>2002</i>											
	08	09	10	11	12	01	02	03	04	05	06	07	08	09	10	11	12
1) Purchase of equipment	■																
2) Installation of sterilizer		■															
3) People education		■															
4) Monitoring			△	△	△	△	△	△	△	△	△	△	△	△	△	△	△

**PDM #36: Water Quality Improvement Plan for the Existing Drinking Water Supply System (c-5)
(Pilot Project)**

Community: Pachum
 Period: Sep. 2001 ~ Dec. 2002

Target Group: Beneficiaries of water supply system
 Implt. Organization: Water Committee

June, 2001

Narrative Summary	Verifiable Indicators	Means of Verification	Important Assumptions
Overall Goal 1. Poverty condition in central highland region will be mitigated.	1. Poverty indicator of rural area will be improved up to the provincial average by 2015.	1. FIS Poverty Indicator and monitoring on Farmers.	1. There will be no drastic change in development policy of Guatemalan Government.
Project Purpose 1. Health condition of inhabitants in Pachum is improved.	1. Morbidity of water-borne diseases in Pachum is reduced.	1. Interview survey of potable water users. 2. Number of water-borne disease patients (such as diarrhea) in the health post.	1. Similar type of projects will be implemented in other communities by utilizing monitoring results of the project.
Outputs 1. Quality of potable water is improved. 2. Beneficiaries use improved potable water. 3. Sterilizer is properly maintained.	1. No colon bacillus is detected in potable water. 2. There is no reduction in the number of water user. 3. Sterilizer is constantly in operation.	1. Simple water quality test 2. Monitoring on potable water user 3. Number of operating days of sterilizer.	1. There is no chemical contamination occurs in potable water.
Activities 1. Education on use of improved water is made for beneficiaries through water committee. 2. Sterilizer is installed to the water supply system. 3. O&M and fee collection of the sterilizer are made by water committee.	Inputs 1. Hypo chlorinates dispenser: 2 sets Q 18,440 2. Hypo chlorinate purchase cost Q 1,030 3. Distribution tank: 2 units Q 193,860 4. Other cost (Technical charge, etc.) Q 13,880 5. Total installation cost (1~4) Q 227,210 6. Cost for education activity Q 4,000 7. Total Cost <u>Q 231,210</u>	1. Installation of sterilizer is made with the consensus of community. 2. No disaster that damages water system occurs such as earthquake.	Pre-conditions 1. There is no strong objection to the installation of sterilizer.

PROJECT PROFILE

Project Name: Plan of Extension of Improved Cooking Stoves and Sauna Baths “*Temascal*” (c-6)
 Community: Pachum

Item	Contents	Remarks																																																																																												
1. Objectives	<ul style="list-style-type: none"> - Reduction of the daily consumption of firewood in order to conserve the forest in the mountain area. - Mitigation of heavy duty of firewood transportation with the reduction of the firewood consumption. - Improvement of the villagers’ health condition with introducing a comfortable and economical sauna bath. 																																																																																													
2. Number of Beneficiaries	Improved stove: 130 houses Improved Temascal: 40 houses																																																																																													
3. Implementation Organization	Pachum stove committee, MAGA and JICA Study Team																																																																																													
4. Project Contents																																																																																														
1) Project Outline	Presently, in the community, people cook with open fire and use traditional sauna bath, which are high-fuel-consuming and uncomfortable due to smoke filled inside. To improve this situation, 130 units of improved stove and 40 units of improved sauna bath will be installed and education on facility use and on forest conservation will be made.																																																																																													
2) Facility / Activity	<table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: center; border-bottom: 1px solid black;"><i>Facilities/Activities</i></th> <th style="text-align: center; border-bottom: 1px solid black;"><i>Implementator</i></th> </tr> </thead> <tbody> <tr> <td>1) Improved stove: 130 units</td> <td>MAGA</td> </tr> <tr> <td>2) Improved Temascal: 40 units</td> <td>MAGA</td> </tr> <tr> <td>3) Demonstration and capacitation and</td> <td>MAGA</td> </tr> </tbody> </table>	<i>Facilities/Activities</i>	<i>Implementator</i>	1) Improved stove: 130 units	MAGA	2) Improved Temascal: 40 units	MAGA	3) Demonstration and capacitation and	MAGA																																																																																					
<i>Facilities/Activities</i>	<i>Implementator</i>																																																																																													
1) Improved stove: 130 units	MAGA																																																																																													
2) Improved Temascal: 40 units	MAGA																																																																																													
3) Demonstration and capacitation and	MAGA																																																																																													
3) Organization for O&M	Community people by themselves																																																																																													
4) Construction Period	Approximately 4 months																																																																																													
5. Project Cost	1) Installation of improved stove Q 114,400 2) Installation of improved sauna..... Q 31,200 3) Demonstration and capacitation Q 20,400 4) Total Cost Q 166,000	Cost born by beneficiaries: Q 19,200																																																																																												
6. Monitoring & Evaluation																																																																																														
	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: center;"><i>Item</i></th> <th style="text-align: center;"><i>Frequency</i></th> <th style="text-align: center;"><i>Data collector</i></th> <th style="text-align: center;"><i>Aggregation</i></th> <th style="text-align: center;"><i>Decision Maker</i></th> </tr> </thead> <tbody> <tr> <td>1) People’s impression on facility use</td> <td>Before installation & 3 months after the installation</td> <td>Villagers</td> <td>MAGA</td> <td>JICA Study Team</td> </tr> <tr> <td>2) Firewood consumption before and after the project</td> <td>Before installation & 3 months after the installation</td> <td>MAGA</td> <td>MAGA</td> <td>JICA Study Team</td> </tr> </tbody> </table>	<i>Item</i>	<i>Frequency</i>	<i>Data collector</i>	<i>Aggregation</i>	<i>Decision Maker</i>	1) People’s impression on facility use	Before installation & 3 months after the installation	Villagers	MAGA	JICA Study Team	2) Firewood consumption before and after the project	Before installation & 3 months after the installation	MAGA	MAGA	JICA Study Team																																																																														
<i>Item</i>	<i>Frequency</i>	<i>Data collector</i>	<i>Aggregation</i>	<i>Decision Maker</i>																																																																																										
1) People’s impression on facility use	Before installation & 3 months after the installation	Villagers	MAGA	JICA Study Team																																																																																										
2) Firewood consumption before and after the project	Before installation & 3 months after the installation	MAGA	MAGA	JICA Study Team																																																																																										
7. Plan of Operation																																																																																														
	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th rowspan="2" style="text-align: center;"><i>Item</i></th> <th colspan="5" style="text-align: center;"><i>2001</i></th> <th colspan="12" style="text-align: center;"><i>2002</i></th> </tr> <tr> <th style="text-align: center;">08</th> <th style="text-align: center;">09</th> <th style="text-align: center;">10</th> <th style="text-align: center;">11</th> <th style="text-align: center;">12</th> <th style="text-align: center;">01</th> <th style="text-align: center;">02</th> <th style="text-align: center;">03</th> <th style="text-align: center;">04</th> <th style="text-align: center;">05</th> <th style="text-align: center;">06</th> <th style="text-align: center;">07</th> <th style="text-align: center;">08</th> <th style="text-align: center;">09</th> <th style="text-align: center;">10</th> <th style="text-align: center;">11</th> <th style="text-align: center;">12</th> </tr> </thead> <tbody> <tr> <td>1) Designing & demonstration</td> <td colspan="5" style="text-align: center;">████████████████████</td> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> </tr> <tr> <td>2) Construction works</td> <td></td><td></td><td></td><td></td><td></td> <td colspan="5" style="text-align: center;">████████████████████</td> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> </tr> <tr> <td>3) Monitoring & Evaluation</td> <td></td><td style="text-align: center;">██████</td><td></td><td></td><td></td> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td style="text-align: center;">██████</td><td></td><td></td><td></td><td></td> </tr> </tbody> </table>	<i>Item</i>	<i>2001</i>					<i>2002</i>												08	09	10	11	12	01	02	03	04	05	06	07	08	09	10	11	12	1) Designing & demonstration	████████████████████																		2) Construction works						████████████████████													3) Monitoring & Evaluation		██████												██████					
<i>Item</i>	<i>2001</i>					<i>2002</i>																																																																																								
	08	09	10	11	12	01	02	03	04	05	06	07	08	09	10	11	12																																																																													
1) Designing & demonstration	████████████████████																																																																																													
2) Construction works						████████████████████																																																																																								
3) Monitoring & Evaluation		██████												██████																																																																																

**PDM #37: Plan of Extension Use of Improved Cooking Stoves and of Sauna Baths “Temascal” (c-6)
(Pilot Project)**

Community: Pachum
 Period: Sep. 2001 ~ Dec. 2002

Target Group: Residents of Pachum
 Implt. Organization: MAGA

June, 2001

Narrative Summary	Verifiable Indicators	Means of Verification	Important Assumptions
Overall Goal 1. Poverty condition in central highland region will be mitigated.	1. Poverty indicator of rural area will be improved up to the provincial average by 2015.	1. FIS Poverty Indicator and monitoring on Farmers.	1. There will be no drastic change in development policy of Guatemalan Government.
Project Purpose 1. Forest will be conserved because firewood consumption will be reduced. 2. Work load will be reduced because firewood collection will be reduced. 3. Respiratory disease will be reduced because improved stove / sauna do not give smoke inside the room. 4. Health condition will be improved because of bathing will be increase.	1.Reduction of firewood consumption (over 20% reduction of present use of firewood consumption) and reduction of time consumption for firewood collection. 2.Reduction of respiratory disease	1. Monitoring on users 2. Record of health post	1. Similar type of projects will be implemented in other communities by utilizing monitoring results of the project.
Outputs 1. Improved stove will be installed and people use them properly. 2. Improved sauna will be installed and people use them properly.	1. Number of installed stove and number of user family 2.Number of installed sauna and number of user family	1.Monitoring on user families	1. There will be no drastic reduction in available amount of firewood because of forest fire, etc.
Activities 1. Designing of improved sauna / stove through people’s participation 2. Demonstration of improved sauna / stove 3. Installation of improved stove (150 units) 4. Installation of improved sauna (40 units) 5. Instruction on use of improved facility 6. Education on forest conservation	Inputs 1. Installation cost for improved stoveQ 114,400 2. Installation cost for improved sauna Q 31,200 3. Cost for demonstration, instruction on facility use and education / capacitation on forest conservation Q 20,400 4. Total Cost <u>Q 166,600</u> 5. Cost born by beneficiaries..... Q 19,200	1. There is no occurrence of natural disaster that damages the facilities such as earthquake.	Pre-conditions 1. There is no strong objection for installation of improved stove and sauna

PROJECT PROFILE

Project Name: Plan for Installation of Minimal Pharmacy Unit (MPU) (c-11)
Community: Pachum

Item	Contents	Remarks										
1. Objectives	Improving the access to sufficient and more variety of drugs at cheap price, covering whole population specially those who are not cover in SIAS program.											
2. Number of Beneficiaries	Approximately 900 persons in 150 households.											
3. Implementation Organization	NGO CDRO											
4. Project Contents												
1) Project Outline	Establishing sustainable revolving drug fund system at MPU, cheaper and accessible essential drugs as well as basic first aid treatment can be offered. The project will be managed by NGO working under SIAS programs (CDRO) who will provide cheap drugs to MPU, and the community pharmacist trained by CDRO will be in charge of MPU. Health Committee will supervise the activity of MPU. Profit of drug sales can be use for incentives to the promoter in charge and educational purpose.											
2) Facility / Activity	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: center;"><i>Facilities/Activities</i></th> <th style="text-align: center;"><i>Implementator</i></th> </tr> </thead> <tbody> <tr> <td>1) Training promoters</td> <td>1) CDRO</td> </tr> <tr> <td>2) Installing MPU</td> <td>2) Contractor, community People.</td> </tr> <tr> <td>3) Initial drug input</td> <td>3) CDRO</td> </tr> <tr> <td>4) Monitoring</td> <td>4) Health committee, CDRO</td> </tr> </tbody> </table>	<i>Facilities/Activities</i>	<i>Implementator</i>	1) Training promoters	1) CDRO	2) Installing MPU	2) Contractor, community People.	3) Initial drug input	3) CDRO	4) Monitoring	4) Health committee, CDRO	
<i>Facilities/Activities</i>	<i>Implementator</i>											
1) Training promoters	1) CDRO											
2) Installing MPU	2) Contractor, community People.											
3) Initial drug input	3) CDRO											
4) Monitoring	4) Health committee, CDRO											
3) Organization for O&M	Health committee ad NGO CDRO.											
4) Construction Period	Training 2 weeks, Installing MPU 1 month											
5. Project Cost	1) Training: Q 15,110 2) Drug input: Q 19,158 3) Materials and Installing MPU: Q 17,124 4) Total Cost: Q 51,392											

6. Monitoring & Evaluation

<i>Item</i>	<i>Frequency</i>	<i>Data collector</i>	<i>Aggregation</i>	<i>Decision Maker</i>
1) stock control and monthly accounting	Monthly	Health committee	NGO CDRO	Study Team
2) Number of first aid treatment attended	Monthly	Health committee	NGO CDRO	Study Team
3) Amount and use of money reserved by health committee	Three times / month	NGO CDRO	Study Team	Study Team

7. Plan of Operation

<i>Item</i>	2001					2002												
	08	09	10	11	12	01	02	03	04	05	06	07	08	09	10	11	12	
1) Training		■	■															
2) MPU construction			■	■														
3) Purchasing drugs				■														
4) Monitoring				■	■	■	■	■	■	■	■	■	■	■	■	■	■	
5) Retraining								■									■	

**PDM #41: Plan for Installation of Minimal Pharmacy Unit (MPU) (c-11)
(Pilot Project)**

Community: Pachum
 Period: Sep. 2001 ~ Dec. 2002

Target Group: Population in Aldea Xesana
 Implt. Organization: CDRO(SIAS), Community Pharmacist and Health Committee

June, 2001

Narrative Summary	Verifiable Indicators	Means of Verification	Important Assumptions
Overall Goal 1. Poverty condition in central highland region will be mitigated.	1. Poverty indicator of rural area will be improved up to the provincial average by 2015.	1. FIS Poverty Indicator and monitoring on Farmers.	1. There will be no drastic change in development policy of Guatemalan Government.
Project Purpose 1. The quality of health service will be improved by operating MPU.	1. Number of patients comes to MPU increased. 2. Decrease of spending on drugs per month (including opportunity cost)	1. Monthly record of MPU 2. Cost and distance comparison of MPU, Health Center and private pharmacies	1. Similar type of projects will be implemented in other neighboring communities with utilizing the monitoring results of this project.
Outputs 1. Drugs becomes easily available geographically and economically (cheap and near) 2. Supply of drugs is sustained through revolving drug fund system	1. Drugs are sold constantly per month (more than Q800) 2. Stock of drugs are well sustained and revolved. 3. Accounting of MPU is properly kept.	1. Daily and monthly record on MPU(sales, stock control etc) 2. Record of MPU (Incoming and outgoing of the stock) 3. Bookkeeping of MPU	1. There is no drastic change of pricing structure of drugs. 2. Demand for drugs is not drastically reduced. 3. NGO gives supervision constantly.
Activities 1. Organizing health committee 2. Choosing community pharmacist 3. Training for community pharmacist and committee members 4. Establishment of MPU 5. Operation of MPU in charge of selling essential drugs at cheaper price 6. Provision of initial drugs and equipment and their transportation 7. Monthly supervision by health committee and CDRO 8. Retraining (every six month) 9. Every three month, MPU orders necessary drugs and purchase from CDRO at a certain rate. 10. Monitoring and Evaluation	Inputs 1. Initial training of community Pharmacist Q 8,700 2. Initial training of health committee Q 1,250 3. One day job on training..... Q 500 4. Retraining of community pharmacist and Committee Q 1,800 5. Monthly follow up and monitoring for One year. Q 1,560 6. Purchasing of initial drug and transportation Q 1,300 7. Initial drug input Q 19,158 8. MPU equipment..... Q 2,669 9. Initial administrative material Q 50 10. First aid kit Q 438 11. Minimal health unit building..... Q 13,967 Total..... Q 51,392	1. Adequate and constant supply of drugs is sustained. 2. Ministry of health (health center, etc.) will support the project. 3. Good coordination with public health facilities Pre-conditions 1. There is strong needs for cheaper and easily accessible drugs in the community 2. The candidate for community pharmacist who meets certain requirements is available. 3. People do not object to the introduction of MPU concept.	

PROJECT PROFILE

Project Name: Plan of Model Farm on Potato Production (b-2)

Community: Palestina

Item	Contents	Remarks						
1. Objectives	To involve farmers in extension activities and to improve potato productivity by establishing model farms with applying ICTA standard cultivation method and other various factors of increasing production (compost feeding, IPM technology, use of clean seeds)							
2. Number of Beneficiaries	210 farmers							
3. Implementation Organization	Development Committee, Potato Section							
4. Project Contents								
1) Project Outline	(1) The following technologies regarding potato production increase are displayed at Model Farm: 1) Cultivation of ICTA standard. 2) Application of various quantities of compost to improve nutritious condition for potato plants. 3) Application of IPM to reduce number of chemical spray and prevent environmental pollution caused by the excessive use of chemicals. 4) Use of clean seeds. (2) The project provides various training to farmers by opening Training courses and field days.							
2) Facility / Activity	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: center;"><i>Facilities/Activities</i></th> <th style="text-align: center;"><i>Implementator</i></th> </tr> </thead> <tbody> <tr> <td>1) Model farm 10 cuerda (2 cuerda/village x 5 villages)</td> <td>Progressive farmers</td> </tr> <tr> <td>2) Training on potato cultivation</td> <td>ICTA or NGOs</td> </tr> </tbody> </table>	<i>Facilities/Activities</i>	<i>Implementator</i>	1) Model farm 10 cuerda (2 cuerda/village x 5 villages)	Progressive farmers	2) Training on potato cultivation	ICTA or NGOs	
<i>Facilities/Activities</i>	<i>Implementator</i>							
1) Model farm 10 cuerda (2 cuerda/village x 5 villages)	Progressive farmers							
2) Training on potato cultivation	ICTA or NGOs							
3) Organization for O&M	Development Committee and advanced farmer who provides land and labor for carry out the project.							
4) Construction Period	One week	Postponed until 1 st crop of 2002						
5. Project Cost	1) Input materials (fertilizers, seeds, agro-chemicals) : Q 8,780 2) Training and others: Q 4,375 3) Total project cost: Q 13,155	Cost born by beneficiaries: Q 3,875						

6. Monitoring & Evaluation

Item	Frequency	Data collector	Aggregation	Decision Maker
1) Potato growing condition	45 day after seeding	Dev. committee	MAGA	Study Team
2) Harvested quantity of potato	Harvesting time	Dev. committee	MAGA	Study Team
3) Number of participants in training and field day	After meetings	Dev. committee	MAGA	Study Team

7. Plan of Operation

Item	2001					2002											
	08	09	10	11	12	01	02	03	04	05	06	07	08	09	10	11	12
1) Preparation of input materials◎								◎									
2) Opening Model Farm									■								
3) Training △ & Field day▲									△	△	△	△					
4) Monitoring◆									▲		▲	▲					
										◆		◆					

**PDM #47: Plan of Model Farm on Potato Production (b-2)
(Pilot Project)**

Community: Palestina
Period: Sep. 2001 ~ Dec. 2002

Target Group: Potato Producing Farmers
Implt. Organization: Potato Growers' Association

June, 2001

Narrative Summary	Verifiable Indicators	Means of Verification	Important Assumptions
<p>Overall Goal</p> <p>1. Poverty condition in central highland region will be mitigated.</p>	<p>1. Poverty indicator of rural area will be improved up to the provincial average by 2015.</p>	<p>1. FIS Poverty Indicator and monitoring on Farmers.</p>	<p>1. There will be no drastic change in development policy of Guatemalan Government.</p>
<p>Project Purpose</p> <p>1. The productivity will increase from present 15 qq/crd to 25~30 qq/crd by cultivation technology transfer and extension.</p> <p>2. Income level of potato producers will be improved.</p>	<p>1. The productivity in the communities will increase.</p> <p>2. Income of the participants will increase.</p>	<p>1. Monitoring on farmers in the communities (sample survey).</p> <p>2. Monitoring on farmers in the communities (sample survey)</p>	<p>1. Similar type of projects will be implemented in other communities by utilizing monitoring results of the project.</p>
<p>Outputs</p> <p>1. Productivity is improved by the replacement of conventional seed potato with clean seed potato.</p> <p>2. Effect of organic fertilizer is proved and excessive reliance on chemical fertilizer is reduced.</p> <p>3. Disease resistant variety is cultivated and use of medicines and chemicals is reduced</p> <p>4. Farmers take interest in the demonstration.</p>	<p>1. Yield of potato will be increased (over 130% of the present yield).</p> <p>2. Yield of potato in each plot, namely, 1) No compost, 2) 1 kg/m², and 3) 2 kg/m².</p> <p>3. Chemical application will be reduced from present 7~8 times to maximum 4 times.</p> <p>4. Participant rate is over 70%.</p>	<p>1. Monitoring of crop yield in model farm</p> <p>2. Monitoring of crop yield in model farm</p> <p>3. Survey by interviewing farmers</p> <p>4. Record of visitors</p>	<p>1. Market price of potato will not deteriorate from present level.</p> <p>2. Demand for potato will not deteriorate from present level.</p> <p>2. Supply of clean seed from ICTA will not cease.</p> <p>3. Farmers can obtain seed potatoes of disease resistant variety to prevent damages by epidemics.</p>
<p>Activities</p> <p>1. Establish model farm</p> <p>1) ICTA Standard Cultivation Section (2.5 cuerda)</p> <p>2) Clean seed section (2.5 cuerda)</p> <p>3) Compost section (2.5 cuerda)</p> <p>4) IPM corroborative section (2.5 cuerda)</p> <p>2. Cultivation and display in model farm, conduct corroborative tests.</p> <p>3. Training activities on cultivation technology.</p> <p>4. Monitoring and evaluation of the project.</p>	<p>Inputs</p> <p>1. Farm input cost (materials) Q 8,780</p> <p>2. Training cost Q 3,500</p> <p>3. Others..... Q 875</p> <p>4. Total Cost..... <u>Q 13,155</u></p> <p>5. Operation cost (born by beneficiaries)..... Q 3,875</p>	<p>1. There is no abnormal spread of plant disease (especially epidemics).</p> <p>2. There is no abnormal weather, specially drought and no frost damage</p> <p>Pre-conditions</p> <p>1. Governmental organization such as ICTA will cooperate in technical assistance.</p>	

PROJECT PROFILE

Project Name: Potato Storage Plan (b-3)
Community: Palestina

Item	Contents	Remarks																
1. Objectives	To search an effective means of long term storage and to ascertain the acceptability of the quality of stored potato by conducting storage test both at farmers' level and at association level. To stabilize farm-gate price of potato through the year and to increase and stabilize farmers' income by operating cold storage and farm level storing.																	
2. Number of Beneficiaries	210 farmers with population of about 1,500																	
3. Implementation Organization	Development committee, potato section																	
4. Project Contents																		
1) Project Outline	1) Storage at farmers level shall be conducted in cellar with cool condition (5~7°C) of the project site. 2) Storage at association level shall be done in low-temperature warehouse (3~5°C) which is constructed by the project for this purpose. 3) Collection of test data and monitoring shall be done periodically.																	
2) Facility / Activity	<table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 60%; text-align: center;"><i>Facilities/Activities</i></th> <th style="width: 40%; text-align: center;"><i>Implementator</i></th> </tr> </thead> <tbody> <tr> <td>1) Storage in cellar 1, 5, 10 qq for 1~2 months</td> <td rowspan="2" style="text-align: center; vertical-align: middle;">Development committee, Potato section</td> </tr> <tr> <td>2) Storage in low-temperature warehouse 2,000qq/about 100tons potato for 3~4</td> </tr> </tbody> </table>	<i>Facilities/Activities</i>	<i>Implementator</i>	1) Storage in cellar 1, 5, 10 qq for 1~2 months	Development committee, Potato section	2) Storage in low-temperature warehouse 2,000qq/about 100tons potato for 3~4												
<i>Facilities/Activities</i>	<i>Implementator</i>																	
1) Storage in cellar 1, 5, 10 qq for 1~2 months	Development committee, Potato section																	
2) Storage in low-temperature warehouse 2,000qq/about 100tons potato for 3~4																		
3) Organization for O&M	Development committee, Potato section by technical training and guidance by consultant.																	
4) Construction Period	3 (three) months																	
5. Project Cost	1) Storage cellar/ Q 16,080 2) Low temperature warehouse / Q 617,632 3) Organization training / Q 22,000 Total Cost Q 655,712																	
6. Monitoring & Evaluation																		
<i>Item</i>	<i>Frequency</i>	<i>Data collector</i>	<i>Aggregation</i>	<i>Decision Maker</i>														
1) Potato price and its storage volume	Once a month after commencement of storage	Development committee	MAGA	Study team														
2) Cost and profit of storage facilities operation	Once a month after commencement of storage	Development committee	MAGA	Study team														
7. Plan of Operation																		
<i>Item</i>	<i>2001</i>					<i>2002</i>												
	08	09	10	11	12	01	02	03	04	05	06	07	08	09	10	11	12	
1) Construction of storage																		
(1) Storage cellar				■														
(2) Low temperature warehouse		■	■	■	■													
2) Implementation and training*					*	*	*	*										
(1) storage cellar					■	■												
(2) Low temperature warehouse					■	■	■	■										
3) Collection data					■	■	■	■										
4) Monitoring					○	○	○	○										

**PDM #48: Potato Storage Plan (b-3)
(Pilot Project)**

Community: Palestina
Period: Sep. 2001 ~ Dec. 2002

Target Group: Potato Producers in Palestina
Implt. Organization: MAGA

June, 2001

Narrative Summary	Verifiable Indicators	Means of Verification	Important Assumptions
<p>Overall Goal</p> <p>1. Poverty condition in central highland region will be mitigated.</p>	<p>1. Poverty indicator of rural area will be improved up to the provincial average by 2015.</p>	<p>1. FIS Poverty Indicator and monitoring on Farmers.</p>	<p>1. There will be no drastic change in development policy of Guatemalan Government.</p>
<p>Project Purpose</p> <p>1. Farm income level will be improved. 2. Supply and price of potato will be stabilized in Palestina area.</p>	<p>1. Income from potato production will be improved. 2. Marketed volume and price of potato in Palestina area.</p>	<p>1. Monitoring on association members 2. Interview survey with potato traders in Palestina area</p>	<p>1. Similar type of projects will be implemented in other communities by utilizing monitoring results of the project.</p>
<p>Outputs</p> <p>1. Growers' Association is in act. 2. Potatoes are stored for 3 months at farmers level and 4~5 months at low temperature storage. 3. Potatoes are sold at higher price.</p>	<p>1. Number of association members and status of activities. 2. Stored volume, period, amount sold, and selling price (80% of planned volume). 3. Stored volume at farmers' level</p>	<p>1. Activity record of the association 2. Operation record of storage facility 3. Monitoring on farmers</p>	<p>1. There is no extreme reduction in the demand for potatoes. 2. There is no heavy drop of potato price.</p>
<p>Activities</p> <p>1. Establishment of Potato Growers' Association 2. Provision of facilities of potato storage: - Farmer level - Association level 3. Execution of storage test - temperature, humidity - potato quality in storage 4. Operation of low temperature warehouse and maintenance. 5. Technical assistance - technical guidance to farmers by ICTA - technical training on operation & maintenance of the cold storage by Consultants 6. Monitoring and evaluation of the project.</p>	<p>Inputs</p> <p>1. Storing facility (farm level)..... Q 16,080 2. Construction cost for low temperature warehouse..... Q 617,632 3. Organization training Q 22,000</p> <p align="right"><u>Total Cost: Q 655,712</u></p>	<p>1. No natural disasters (such as earthquake) that damage the facility occur. 2. Growers bring part of their produces to the facility.</p> <p>Pre-conditions</p> <p>1. Related parties such as Municipality of Palestina and ICTA should be cooperative to the execution of the project.</p>	

PROJECT PROFILE

Project Name: Mini-Irrigation Plan (b-5)

Community: Palestina

Item	Contents	Remarks																
1. Objectives	To increase farmers' income by means of 1) increasing the crop intensity with a pumping-up irrigation system and vinyl houses, 2) crop diversification and 3) organization of users association in terms of O&M of facilities and marketing.																	
2. Number of Beneficiaries	Beneficiaries in the initial stage : 75 farmers, (150 farmers in total)																	
3. Implementation Organization	Irrigation Committee of Palestina de Los Altos																	
4. Project Contents																		
1) Project Outline	In Palestina area, the farmers cultivate low profitable crops, such as potato and maize, under rainfed conditions. Because of small land areas, climatic and topographic limitations, the agriculture production in Palestina area cannot sustain their families at present. This project aims to stabilize and increase the farmers' incomes by means of introducing a small-scale irrigated cultivation with spring water which is not utilized effectively in the area.																	
2) Facility / Activity	<table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: center; border: 1px dashed black;"><i>Facilities/Activities</i></th> <th style="text-align: center; border: 1px dashed black;"><i>Implementator</i></th> </tr> </thead> <tbody> <tr> <td style="border: 1px dashed black;">1) Pump station (1 pump, 1 house)</td> <td style="border: 1px dashed black;">Contractor (1-3)</td> </tr> <tr> <td style="border: 1px dashed black;">2) Pipeline ; Conduction pipeline : 1.6 km Distribution pipeline : 3.2 km</td> <td style="border: 1px dashed black;"></td> </tr> <tr> <td style="border: 1px dashed black;">3) Elevated regulating tank : 180 m³</td> <td style="border: 1px dashed black;"></td> </tr> <tr> <td style="border: 1px dashed black;">4) Technical assistance : farming practices and marketing</td> <td style="border: 1px dashed black;">ICTA / INTECAP/marketing company</td> </tr> <tr> <td style="border: 1px dashed black;">5) Organization of the irrigation committee</td> <td style="border: 1px dashed black;">The study team</td> </tr> </tbody> </table>	<i>Facilities/Activities</i>	<i>Implementator</i>	1) Pump station (1 pump, 1 house)	Contractor (1-3)	2) Pipeline ; Conduction pipeline : 1.6 km Distribution pipeline : 3.2 km		3) Elevated regulating tank : 180 m ³		4) Technical assistance : farming practices and marketing	ICTA / INTECAP/marketing company	5) Organization of the irrigation committee	The study team					
<i>Facilities/Activities</i>	<i>Implementator</i>																	
1) Pump station (1 pump, 1 house)	Contractor (1-3)																	
2) Pipeline ; Conduction pipeline : 1.6 km Distribution pipeline : 3.2 km																		
3) Elevated regulating tank : 180 m ³																		
4) Technical assistance : farming practices and marketing	ICTA / INTECAP/marketing company																	
5) Organization of the irrigation committee	The study team																	
3) Organization for O&M	Irrigation committee (in cooperation with the Municipality office)																	
4) Construction Period	4.5 month																	
5. Project Cost	1) Construction cost Q 1,180,000 2) Training cost Q 48,000 3) Total Cost Q 1,228,000	Cost born by beneficiaries: Q 143,000																
6. Monitoring & Evaluation																		
<i>Item</i>	<i>Frequency</i>	<i>Data collector</i>	<i>Aggregation</i>	<i>Decision Maker</i>														
1) No. of beneficiary's attendants to the construction work	Everyday during construction period	Irri. Committee	MAGA	Study Team Study Team														
2) Progress of construction works	Every half month	MAGA/PJT staff	Study Team	Study Team														
3) Total benefits	Before and after 1 st crop season	MAGA/PJT staff	Study Team	Study Team														
4) Collection rate of the water charge	Every month	Irri. Committee	MAGA	Study Team														
7. Plan of Operation																		
<i>Item</i>	<i>2001</i>					<i>2002</i>												
	08	09	10	11	12	01	02	03	04	05	06	07	08	09	10	11	12	
1) Construction works																		
2) Technical assistance																		
3) Cultivation																		
4) Monitoring			△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	

**PDM #50: Mini-irrigation Plan (b-5)
(Pilot Project)**

Community: Palestina
Period: Sep. 2001 ~ Nov. 2002

Target Group: 75 Vegetable Producers
Implt. Organization: MAGA & Water Users' Association

June, 2001

Narrative Summary	Verifiable Indicators	Means of Verification	Important Assumptions
<p>Overall Goal</p> <p>1. Poverty condition in central highland will be mitigated.</p>	<p>1. Farm income level will increase up to the provincial average by 2015.</p>	<p>1. Monitoring of farm income through sample interview survey and statistics.</p>	<p>1. There will be no drastic change in development policy of the Guatemalan government.</p>
<p>Project Purpose</p> <p>1. Income level of the beneficiaries will be improved.</p>	<p>1. Income level of the beneficiaries (income from vegetable production) will increase.</p>	<p>1. Monitoring of farm income through interview survey.</p>	<p>1. Similar type of projects will be implemented in other neighboring communities with utilizing the monitoring results of this project.</p>
<p>Outputs</p> <p>1. Irrigation system is utilized. 2. Water users' association is in act. 3. Water charge is properly collected. 4. The facility is properly maintained by the water users. 5. Farmers master skill of vegetable production. 6. Increase of land use intensity from 2 harvests to 3 harvests per year. 7. Increase of crop yield and quality.</p>	<p>1. Number of water users association and number of facility users 2. Collection rate is more than 80%. 3. Condition of operation and maintenance of the facility (Utilization of water charge and actual working days of the facility) 4. Number of farmers that practice vegetable production.</p>	<p>1. Record of water users' association and water users. 2. Record of water charge collection (account book). 3. Monitoring of the facility 4. Monitoring of farmers 5. Monitoring on agricultural production.</p>	<p>1. Demand for vegetable will not be worsen. 2. There is no extreme reduction in the price of vegetable.</p>
<p>Activities</p> <p>1. Construction of irrigation system. 2. Establishment of water users association and its strengthening 3. Collection of water charge by water users' association. 4. Operation and maintenance of system by water users themselves 5. Training on vegetable production 6. Acquisition of farm inputs for vegetable production 7. Arrangements for obtaining credit from Rural Bank or contract growers 8. Arrangements for marketing of vegetables</p>	<p>Inputs</p> <p>1. Construction cost, training cost for operation and maintenance of irrigation system and: Q 1,180,000 2. Cost for technical assistance of agricultural farm practices and organizational assistance for water users' association (its establishment and strengthening): Q 48,000 3. Total Cost: Q 1,228,000 4. Cost for provision of initial farm inputs of vegetable production (born by beneficiaries): Q 143,000</p>	<p>1. There is no abnormal weather such as drought, abnormal scale typhoon, etc. 2. There is no abnormal outbreak of pests and/or diseases of vegetables.</p> <p>Pre-conditions</p> <p>1. People have intention to participate in construction of irrigation system and are willing to pay necessary cost (water charge, etc.)</p>	

PROJECT PROFILE

Project Name: Water Quality Improvement Plan for the Existing Drinking Water Supply (c-5)
 Community: Palestina

Item	Contents	Remarks																																																																																																														
1. Objectives	To improve health condition of the community residents through improvement of drinking water quality by installation of sterilizer.																																																																																																															
2. Number of Beneficiaries	Users of present potable water supply system: 106 houses (about 530 persons)																																																																																																															
3. Implementation Organization	Water Committee																																																																																																															
4. Project Contents																																																																																																																
1) Project Outline	Sterilizer will be installed to the water tank and hypo chlorinate will be injected into the potable water in order to eliminate bacteria. People education will be conducted so that people use improved water continuously and pay necessary expense for the operation of sterilizer.																																																																																																															
2) Facility / Activity	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: center;">Facilities/Activities</th> <th style="text-align: center;">Implementator</th> </tr> </thead> <tbody> <tr> <td>1) Hypo chlorinates Dosing 3 unit</td> <td rowspan="2" style="text-align: center;">Contractor Water Committee (under the supervision of the study team)</td> </tr> <tr> <td>2) People education</td> </tr> </tbody> </table>	Facilities/Activities	Implementator	1) Hypo chlorinates Dosing 3 unit	Contractor Water Committee (under the supervision of the study team)	2) People education																																																																																																										
Facilities/Activities	Implementator																																																																																																															
1) Hypo chlorinates Dosing 3 unit	Contractor Water Committee (under the supervision of the study team)																																																																																																															
2) People education																																																																																																																
3) Organization for O&M	Water Committee																																																																																																															
4) Construction Period	1 week (Period necessary for installation of sterilizer)																																																																																																															
5. Project Cost	1. Hypo chlorinates dosing..... Q 27,660 2. Hypo chlorinate purchase cost Q 1,160 3. Distribution tank Q 96,930 4. Other cost (technical charge, etc.)..... Q 20,820 5. Total installation cost (1~4)..... Q 146,570 6. Cost for education activity Q 4,000 7. Total Cost..... Q 150,570																																																																																																															
6. Monitoring & Evaluation																																																																																																																
	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: center;">Item</th> <th style="text-align: center;">Frequency</th> <th style="text-align: center;">Data collector</th> <th style="text-align: center;">Aggregation</th> <th style="text-align: center;">Decision Maker</th> </tr> </thead> <tbody> <tr> <td>1) Users of improved water</td> <td>Every 3 months</td> <td>Dev. Committee</td> <td>FIS</td> <td>Study Team</td> </tr> <tr> <td>2) Operation status of sterilizer</td> <td>Monthly</td> <td>Dev. Committee</td> <td>FIS</td> <td>Study Team</td> </tr> <tr> <td>3) Number of diarrhea patient</td> <td>Every 3 months</td> <td>Dev. Committee</td> <td>FIS</td> <td>Study Team</td> </tr> <tr> <td>4) Simple water quality test</td> <td>Every 3 months</td> <td>FIS</td> <td>FIS</td> <td>Study Team</td> </tr> </tbody> </table>	Item	Frequency	Data collector	Aggregation	Decision Maker	1) Users of improved water	Every 3 months	Dev. Committee	FIS	Study Team	2) Operation status of sterilizer	Monthly	Dev. Committee	FIS	Study Team	3) Number of diarrhea patient	Every 3 months	Dev. Committee	FIS	Study Team	4) Simple water quality test	Every 3 months	FIS	FIS	Study Team																																																																																						
Item	Frequency	Data collector	Aggregation	Decision Maker																																																																																																												
1) Users of improved water	Every 3 months	Dev. Committee	FIS	Study Team																																																																																																												
2) Operation status of sterilizer	Monthly	Dev. Committee	FIS	Study Team																																																																																																												
3) Number of diarrhea patient	Every 3 months	Dev. Committee	FIS	Study Team																																																																																																												
4) Simple water quality test	Every 3 months	FIS	FIS	Study Team																																																																																																												
7. Plan of Operation																																																																																																																
	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th rowspan="2" style="text-align: center;">Item</th> <th colspan="5" style="text-align: center;">2001</th> <th colspan="12" style="text-align: center;">2002</th> </tr> <tr> <th style="text-align: center;">08</th> <th style="text-align: center;">09</th> <th style="text-align: center;">10</th> <th style="text-align: center;">11</th> <th style="text-align: center;">12</th> <th style="text-align: center;">01</th> <th style="text-align: center;">02</th> <th style="text-align: center;">03</th> <th style="text-align: center;">04</th> <th style="text-align: center;">05</th> <th style="text-align: center;">06</th> <th style="text-align: center;">07</th> <th style="text-align: center;">08</th> <th style="text-align: center;">09</th> <th style="text-align: center;">10</th> <th style="text-align: center;">11</th> <th style="text-align: center;">12</th> </tr> </thead> <tbody> <tr> <td>1) Purchase of equipment</td> <td style="text-align: center;">■</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>2) Installation of sterilizer</td> <td style="text-align: center;">■</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>3) People education</td> <td style="text-align: center;">■</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>4) Monitoring</td> <td></td> <td></td> <td style="text-align: center;">△</td> <td style="text-align: center;">△</td> <td style="text-align: center;">△</td> <td style="text-align: center;">△</td> <td style="text-align: center;">△</td> <td style="text-align: center;">△</td> <td style="text-align: center;">△</td> <td style="text-align: center;">△</td> <td style="text-align: center;">△</td> <td style="text-align: center;">△</td> <td style="text-align: center;">△</td> <td style="text-align: center;">△</td> <td style="text-align: center;">△</td> <td style="text-align: center;">△</td> <td style="text-align: center;">△</td> </tr> </tbody> </table>	Item	2001					2002												08	09	10	11	12	01	02	03	04	05	06	07	08	09	10	11	12	1) Purchase of equipment	■																		2) Installation of sterilizer	■																		3) People education	■																		4) Monitoring			△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	
Item	2001					2002																																																																																																										
	08	09	10	11	12	01	02	03	04	05	06	07	08	09	10	11	12																																																																																															
1) Purchase of equipment	■																																																																																																															
2) Installation of sterilizer	■																																																																																																															
3) People education	■																																																																																																															
4) Monitoring			△	△	△	△	△	△	△	△	△	△	△	△	△	△	△																																																																																															

**PDM #55: Water Quality Improvement Plan for the Existing Drinking Water Supply System (c-5)
(Pilot Project)**

Community: Palestina
 Period: Sep. 2001 ~ Dec. 2002

Target Group: Beneficiaries of water supply system
 Implt. Organization: MAGA & Water Committee

June, 2001

Narrative Summary	Verifiable Indicators	Means of Verification	Important Assumptions
<p>Overall Goal</p> <p>1. Poverty condition in central highland region will be mitigated.</p>	<p>1. Poverty indicator of rural area will be improved up to the provincial average by 2015.</p>	<p>1. FIS Poverty Indicator and monitoring on Farmers.</p>	<p>1. There will be no drastic change in development policy of Guatemalan Government.</p>
<p>Project Purpose</p> <p>1. Health condition of inhabitants in Palestina is improved.</p>	<p>1. Morbidity of water-borne diseases in Palestina is reduced.</p>	<p>1. Interview survey of potable water users. 2. Number of water-borne disease patients (such as diarrhea) in the health post.</p>	<p>1. Similar type of projects will be implemented in other communities by utilizing monitoring results of the project.</p>
<p>Outputs</p> <p>1. Quality of potable water is improved. 2. Beneficiaries use improved potable water. 3. Sterilizer is properly maintained.</p>	<p>1. No colon bacillus is detected in potable water. 2. There is no reduction in the number of water user. 3. Sterilizer is constantly in operation.</p>	<p>1. Simple water quality test. 2. Monitoring on potable water user. 3. Number of operating days of sterilizer.</p>	<p>1. There is no chemical contamination occurs in potable water.</p>
<p>Activities</p> <p>1. Education on use of improved water is made for beneficiaries through water committee. 2. Sterilizer is installed to the water supply system. 3. O&M and fee collection of the sterilizer are made by water committee.</p>	<p>Inputs</p> <p>1. Hypo chlorinate dosing..... Q 27,660 2. Hypo chlorinate purchase cost Q 1,160 3. Distribution tank Q 96,930 4. Other cost (technical charge, etc.)..... Q 20,820 5. Total installation cost (1~4) Q 146,570 6. Cost for education activity Q 4,000 7. Total Cost..... Q 150,570</p>	<p>1. Installation of sterilizer is made with the consensus of community. 2. No disaster that damages water system occurs such as earthquake.</p>	<p>Pre-conditions</p> <p>1. There is no strong objection to the installation of sterilizer.</p>

PROJECT PROFILE

Project Name: Municipality Community Health Service Plan (c-12)
Community: Palestina

Item	Contents	Remarks															
1. Objectives	To offer better access to cheaper and more variety of drugs at municipal and village level, by selling PROAM drugs at Municipal Pharmacy Unit located in villages; as well as offer sustainable health education program to the community.																
2. Number of Beneficiaries	Approximately 3,000 persons in 325 households in 5 villages.																
3. Implementation Organization	Health Committee of Los Cabrera and Los Diaz, Health Center and Municipality/JICA Study Team																
4. Project Contents																	
1) Project Outline	Introduce cheap drugs from PROAM and first aid attention to Municipal Pharmacy and two Minimal Pharmacy Unit (MPU) in village level. Health Promoters will be in charge of the MPUs previously trained by Health Center and professional pharmacist. Auxiliary Pharmacist in charge of Municipal Pharmacy must be trained to full fill requirements of PROAM. Selling price of drugs can be increase 133% and the profit can be keep as incentive for promoters and health committee for sustainable education program to the community. The operation must be supervised monthly by municipality for accountant issues ad technical assistance by health center.																
2) Facility / Activity	<table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: center;"><i>Facilities/Activities</i></th> <th style="text-align: center;"><i>Implementator</i></th> </tr> </thead> <tbody> <tr> <td>1) Pharmacy building and equipment</td> <td>1) Contractor</td> </tr> <tr> <td>2) Drug input for 6 months</td> <td>2) Municipal Pharmacy /JICA</td> </tr> <tr> <td>3) Promoter Training</td> <td>3) Health Center, Professional Pharmacist</td> </tr> <tr> <td>4) Auxiliary Pharmacist training</td> <td>4) CEGIMED</td> </tr> </tbody> </table>	<i>Facilities/Activities</i>	<i>Implementator</i>	1) Pharmacy building and equipment	1) Contractor	2) Drug input for 6 months	2) Municipal Pharmacy /JICA	3) Promoter Training	3) Health Center, Professional Pharmacist	4) Auxiliary Pharmacist training	4) CEGIMED						
<i>Facilities/Activities</i>	<i>Implementator</i>																
1) Pharmacy building and equipment	1) Contractor																
2) Drug input for 6 months	2) Municipal Pharmacy /JICA																
3) Promoter Training	3) Health Center, Professional Pharmacist																
4) Auxiliary Pharmacist training	4) CEGIMED																
3) Organization for O&M	Health committee, Health Center and Municipality.																
4) Construction Period	4 month training Auxiliary Pharmacist, 3 weeks training promoters, 1 month construction MPU.																
5. Project Cost	1) Equipment MPU: Q. 34,355 2) Drug Input: Q. 22,932 3) Training: Q. 34,550 4) Total Cost: Q 91,837																
6. Monitoring & Evaluation																	
<i>Item</i>	<i>Frequency</i>	<i>Data collector</i>	<i>Aggregation</i>	<i>Decision Maker</i>													
1) Drug sales and stock control	Monthly	H. committee	Municipality	Study Team													
2) Health education participants	Monthly	H. committee	Health center	Study Team													
3) Amount and use of money reserved by health committee	Monthly	Municipality	Municipality	Study Team													
4) Participation of health center in education session	Every 3 months	Municipality	Study Team	Study Team													
7. Plan of Operation																	
<i>Item</i>	<i>2001</i>					<i>2002</i>											
	08	09	10	11	12	01	02	03	04	05	06	07	08	09	10	11	12
1) Training																	
2) Installation MPU																	
3) Registration to PROAM																	
4) Health education																	
5) Monitoring					△	△	△	△	△	△	△	△	△	△	△	△	△

**PDM #58: Municipality Community Health Service Plan (c-12)
(Pilot Project)**

Community: Palestina	Target Group: People in relevant communities
Period: Sep. 2001 ~ Dec. 2002	Implt. Organization: Municipality, Health Center, Municipal Pharmacy, Health Committee, Health Promoter

June, 2001

Narrative Summary	Verifiable Indicators	Means of Verification	Important Assumptions
Overall Goal 1. Poverty condition in central highland region will be mitigated.	1. Poverty indicator of rural area will be improved up to the provincial average by 2015.	1. FIS Poverty Indicator and monitoring on Farmers.	1. There will be no drastic change in development policy of Guatemalan Government.
Project Purpose 1. People will have sufficient knowledge on health and hygiene. 2. Improvement of rural health service quality.	1. Reduction of particular morbidity rate. 2. Increase of family planning utility and vaccination rate. 3. Distance, time and cost saved to buy drugs.	1. Medical statistics at Municipal level 2. Sample survey in the 5 communities 3. Cost and distance comparison of MPU and private pharmacies.	1. Similar type of projects will be implemented in other neighboring communities with utilizing the monitoring results of this project.
Outputs 1. Drugs are available at cheap price as well as first aid treatment at the village level 2. Drugs at Municipal Pharmacy become cheaper by introduction of PROAM 3. Regular health education program is conducted at village level 4. Incentives for health promoters are sustained through revolving drug fund.	1. Drugs are sold at MPU and Municipal Pharmacy more than Q800 / month/ MPU. 2. Participants in health education increase. 3. Stock is controlled accurately and accounting is kept appropriately. 4. Number of health promoters in active does not reduce.	1. Accounting record of MPU and Municipal Pharmacy 2. Monitoring of health education by health promoter 3. Monthly accounting and stock control record 4. Monitoring by health committee and municipality	1. There is no drastic change in pricing structure of drugs. 2. Demand for drugs is not drastically reduced. 3. People's interest and willingness to participate in health education is sustained.
Activities 1. Establishment of health committee 2. Selection of auxiliary pharmacist and promoter candidates 3. Training of 1 auxiliary pharmacist and 2 health promoters and health committee members 4. Introduction of cheaper PROAM drugs at Municipal pharmacy 5. Installation of Minimal Health Unit in charge of selling cheap PROAM drugs and first aid treatment in the village 6. Monthly health education by promoters and health center 7. Monthly supervision of MPU by committee as well as municipality	Inputs 1. Training cost of an auxiliary pharmacist - Course for 200 hours by CEGIMED Q 5,800 2. Training cost of two health Promoters who will be in charge of MPU..... Q 24,050 - 10 days on pharmaceutical issues, - 5 days on health education & first aid 3. Training cost of health committee in charge of MPU administration..... Q 1,000 - One day by professional pharmacist 4. Initial cost for drug inputs and initial equipment (shelf, table, chair, safety boxes, administrative materials, first aid kit) for 2 MPUs and transportation Q 29,453 5. Building cost of MPU..... Q 27,934 6. Cost for Health Education Materials..... Q 3,600 <u>Total Cost: Q 91,837</u>	1. Supply of drugs from PROAM is stable. 2. Sales of drugs are sufficient in order to give incentives to health promoters.	Pre-conditions 1. Cooperation and good coordination among municipality, municipal pharmacy and health center are sustained. 2. Candidates for health promoters and auxiliary pharmacist who will meet certain criteria are available and they are able to attend the training courses.

PROJECT PROFILE

Project Name: Plan for Migrant People to the Coastal Areas (c-13)

Community: Palestina

Item	Contents	Remarks																																																																																																														
1. Objectives	People in Palestina de Los Altos has a very small landholding size and their economy remains at subsistent level. About 80% of the people annually migrate to hacienda in the coastal area to rent lands for obtaining maize and income as agricultural labor. However, the living and health condition in the hacienda area is very severe. Most of the people suffer from water-born diseases, malaria, dengue and contamination by agricultural chemicals. This project aims to improve such bad by educational training for migrant people and provision of materials necessary for preventing diseases and contamination.																																																																																																															
2. Number of Beneficiaries	5 about 200 households in 5 caserios																																																																																																															
3. Implementation Organization	Migrant people committee/JICA Study Team																																																																																																															
4. Project Contents																																																																																																																
1) Project Outline	1) A base-line survey will be carried out for selected farmers to grasp and identify problems of living conditions such as health, sanitation, agricultural chemical contamination, etc. 2) An educational training system will be established. And training programs will provide technical services on health control with migrant people. 3) Provision of materials (simple water filter system, materials to prevent agricultural chemical contamination, seeds of repellent plant and simple toilet) for preventing migrant people from diseases and contamination.																																																																																																															
2) Facility / Activity	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 50%;"><i>Facilities/Activities</i></th> <th style="width: 50%;"><i>Implementator</i></th> </tr> </thead> <tbody> <tr> <td>1) Training for 10 staff of health center and 10 school teachers</td> <td>1) NGO</td> </tr> <tr> <td>2) Training for 20 health promoters</td> <td>2) NGO/auxiliary nurses</td> </tr> <tr> <td>3) Training for 200 migrant people</td> <td>3) NGO, auxiliary nurses, school teachers</td> </tr> <tr> <td>4) Provision of materials necessary for preventing diseases and contamination</td> <td>4) NGO/JICA</td> </tr> <tr> <td>5) Setting up committee</td> <td>5) NGO</td> </tr> </tbody> </table>	<i>Facilities/Activities</i>	<i>Implementator</i>	1) Training for 10 staff of health center and 10 school teachers	1) NGO	2) Training for 20 health promoters	2) NGO/auxiliary nurses	3) Training for 200 migrant people	3) NGO, auxiliary nurses, school teachers	4) Provision of materials necessary for preventing diseases and contamination	4) NGO/JICA	5) Setting up committee	5) NGO																																																																																																			
<i>Facilities/Activities</i>	<i>Implementator</i>																																																																																																															
1) Training for 10 staff of health center and 10 school teachers	1) NGO																																																																																																															
2) Training for 20 health promoters	2) NGO/auxiliary nurses																																																																																																															
3) Training for 200 migrant people	3) NGO, auxiliary nurses, school teachers																																																																																																															
4) Provision of materials necessary for preventing diseases and contamination	4) NGO/JICA																																																																																																															
5) Setting up committee	5) NGO																																																																																																															
3) Organization for O&M																																																																																																																
4) Construction Period	1) Base line survey:4 weeks, 2)training for staff of health center and school teachers, 3) training for health promoters:1 month, 4) training for migrant people: 2 months, and 5) monitoring: 2months																																																																																																															
5. Project Cost	1) Training (including base line survey/monitoring): Q 116,000 2) Cost of materials to prevent diseases and contamination: Q 260,000 3) Cost of materials for training : Q 18,000 4) Total cost : Q 394,000																																																																																																															
6. Monitoring & Evaluation																																																																																																																
	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 20%;"><i>Item</i></th> <th style="width: 15%;"><i>Frequency</i></th> <th style="width: 15%;"><i>Data collector</i></th> <th style="width: 15%;"><i>Aggregation</i></th> <th style="width: 35%;"><i>Decision Maker</i></th> </tr> </thead> <tbody> <tr> <td>1) Use condition of water filter and toilet</td> <td>2 times/15 months</td> <td>NGO</td> <td>NGO</td> <td>JICA Study Team</td> </tr> <tr> <td>2) Use condition of materials for agri. chem. contamination</td> <td>2 times/15 months</td> <td>NGO</td> <td>NGO</td> <td>JICA Study Team</td> </tr> <tr> <td>3) Growing condition of repellent plants</td> <td>2 times/15 months</td> <td>NGO</td> <td>NGO</td> <td>JICA Study Team</td> </tr> <tr> <td>4) Number of morbidity</td> <td>2 times/15 months</td> <td>NGO</td> <td>NGO</td> <td>JICA Study Team</td> </tr> </tbody> </table>	<i>Item</i>	<i>Frequency</i>	<i>Data collector</i>	<i>Aggregation</i>	<i>Decision Maker</i>	1) Use condition of water filter and toilet	2 times/15 months	NGO	NGO	JICA Study Team	2) Use condition of materials for agri. chem. contamination	2 times/15 months	NGO	NGO	JICA Study Team	3) Growing condition of repellent plants	2 times/15 months	NGO	NGO	JICA Study Team	4) Number of morbidity	2 times/15 months	NGO	NGO	JICA Study Team																																																																																						
<i>Item</i>	<i>Frequency</i>	<i>Data collector</i>	<i>Aggregation</i>	<i>Decision Maker</i>																																																																																																												
1) Use condition of water filter and toilet	2 times/15 months	NGO	NGO	JICA Study Team																																																																																																												
2) Use condition of materials for agri. chem. contamination	2 times/15 months	NGO	NGO	JICA Study Team																																																																																																												
3) Growing condition of repellent plants	2 times/15 months	NGO	NGO	JICA Study Team																																																																																																												
4) Number of morbidity	2 times/15 months	NGO	NGO	JICA Study Team																																																																																																												
7. Plan of Operation																																																																																																																
	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th rowspan="2" style="width: 20%;"><i>Item</i></th> <th colspan="5" style="text-align: center;"><i>2001</i></th> <th colspan="12" style="text-align: center;"><i>2002</i></th> </tr> <tr> <th style="width: 3.33%;"><i>08</i></th> <th style="width: 3.33%;"><i>09</i></th> <th style="width: 3.33%;"><i>10</i></th> <th style="width: 3.33%;"><i>11</i></th> <th style="width: 3.33%;"><i>12</i></th> <th style="width: 3.33%;"><i>01</i></th> <th style="width: 3.33%;"><i>02</i></th> <th style="width: 3.33%;"><i>03</i></th> <th style="width: 3.33%;"><i>04</i></th> <th style="width: 3.33%;"><i>05</i></th> <th style="width: 3.33%;"><i>06</i></th> <th style="width: 3.33%;"><i>07</i></th> <th style="width: 3.33%;"><i>08</i></th> <th style="width: 3.33%;"><i>09</i></th> <th style="width: 3.33%;"><i>10</i></th> <th style="width: 3.33%;"><i>11</i></th> <th style="width: 3.33%;"><i>12</i></th> </tr> </thead> <tbody> <tr> <td>1) Base-line survey</td> <td></td> <td style="background-color: black;">■</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>2) Educational training</td> <td></td> <td></td> <td></td> <td style="background-color: black;">■</td> <td style="background-color: black;">■</td> <td style="background-color: black;">■</td> <td style="background-color: black;">■</td> <td style="background-color: black;">■</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>3) Provision of materials</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td style="background-color: black;">■</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>4) Monitoring</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td style="text-align: center;">△</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td style="text-align: center;">△</td> </tr> </tbody> </table>	<i>Item</i>	<i>2001</i>					<i>2002</i>												<i>08</i>	<i>09</i>	<i>10</i>	<i>11</i>	<i>12</i>	<i>01</i>	<i>02</i>	<i>03</i>	<i>04</i>	<i>05</i>	<i>06</i>	<i>07</i>	<i>08</i>	<i>09</i>	<i>10</i>	<i>11</i>	<i>12</i>	1) Base-line survey		■																	2) Educational training				■	■	■	■	■											3) Provision of materials								■											4) Monitoring										△							△	
<i>Item</i>	<i>2001</i>					<i>2002</i>																																																																																																										
	<i>08</i>	<i>09</i>	<i>10</i>	<i>11</i>	<i>12</i>	<i>01</i>	<i>02</i>	<i>03</i>	<i>04</i>	<i>05</i>	<i>06</i>	<i>07</i>	<i>08</i>	<i>09</i>	<i>10</i>	<i>11</i>	<i>12</i>																																																																																															
1) Base-line survey		■																																																																																																														
2) Educational training				■	■	■	■	■																																																																																																								
3) Provision of materials								■																																																																																																								
4) Monitoring										△							△																																																																																															

**PDM #59: Plan for Migrant People to the Coastal Areas (c-13)
(Pilot Project)**

Community: Palestina
Period: Sep. 2001 ~ Dec. 2002

Target Group: Migrants in Palestina de Los Altos
Implt. Organization: JICA

June, 2001

Narrative Summary	Verifiable Indicators	Means of Verification	Important Assumptions
<p>Overall Goal</p> <p>1. Poverty condition in central highland region will be mitigated.</p>	<p>1. Poverty indicator of rural area will be improved up to the provincial average by 2015.</p>	<p>1. FIS Poverty Indicator and monitoring on Farmers.</p>	<p>1. There will be no drastic change in development policy of Guatemalan Government.</p>
<p>Project Purpose</p> <p>1. Health condition of the migrants will be improved.</p>	<p>1. Reduction of top-ten illness of migrants by 15 per cent.</p>	<p>1. Result of and sample survey on morbidity of migrants</p>	<p>1. Similar type of projects will be implemented in other neighboring communities.</p>
<p>Outputs</p> <p>1. Migrants use the water filter and obtain safe drinking water. 2. Migrants use pesticides properly and are free from diseases. 3. Migrants cultivate repellents plants. 4. Migrants prepare and use simple toilets and improve sanitary conditions. 5. Health personnel train migrants on the 4 subjects (safe water, pesticides, Malaria/Dengue & toilets)</p>	<p>1. 80% of the migrants use water filter. 2. 80% of the migrants use pesticides-precaution set. 3. 80% of migrant perceive that there is repellent effect by plants. 4. 80% of the migrants prepare toilets 5. Number of mobility</p>	<p>1. Result of sample survey in the field</p>	<p>1. The living condition of migrants does not change dramatically in the destination.</p>
<p>Activities</p> <p>1. Use of safe water - Provision of water filter - Training* on use of water filter and general knowledge of safe water 2. Precaution of pesticide use - Provision of precaution material (mask, grove, etc.) - Training* on pesticide precaution and general knowledge on pesticides 3. Malaria/Dengue prevention - Provision of seeds of anti-Malaria / Dengue plants. - Training* on practical knowledge for prevention of tropical disease. 4. Sanitation - Provision of simple toilets for migrants - Training* on use of simple toilet and general knowledge on sanitary * Training will be conducted for Health Center, School teacher, Health Promoter and Migrants. 5. Provision of teaching materials to school teachers, health center and health promoter</p>	<p>Inputs</p> <p>1. Purchasing cost of necessary equipment - Water filters (@520 x 200 units).....Q 112,000 - Precaution materials (@200 x 200 units).....Q 40,000 - Plant's seeds (@100 x 200 units).....Q 20,000 - Simple toilets (@500 x 200 units)Q 88,000 Sub-total: Q 260,000 2. Training cost.....Q 116,000 - Safe water use - Precaution - Prevention - Toilet use 3. Purchasing cost of teaching materials for school teachers.....Q 18,000 4. Total CostQ 394,000</p>	<p>1. Trained personnel in the health center and health promoters remain in Palestina in the following year. 2. Trained school teachers remain in Palestina 3. The destination of migrants do not change dramatically</p> <p>Pre-conditions</p> <p>1. The migrants in Palestina and fincas do not object the project.</p>	

8.4 Implementation of Pilot Projects

The proposed organization is shown below. The JICA Study Team will be responsible for overall management of implementation of Pilot Projects in corporation with MAGA. The formulated 18 Pilot Projects cover various fields of development and work components, including (i) environmental and conservation plan (ii) plans for increasing income generation and improvement plan for living conditions. With exception of the Pilot Projects in an agricultural field that MAGA will implement, participation of other organizations relevant to the implementation of Pilot Projects in other fields is essential. Therefore, it is proposed to establish a steering coordination committee of representatives from relevant organizations.

The committee headed by a representative of MAGA. The member of the committee will consist of representatives from SEGEPLAN, MSPAS, ICTA, FIS, INTECAP, JICA/JOCV office, governors of the four provinces (Chimaltenango, Sololá, Totonicapán and Quetzaltenango), four relevant municipalities (Patzun, Panyebar, Santa Maria Chiquimula, and Palestina de Altos) and JICA Study Team.

Provincial offices of the organizations that participate in a steering committee will make supervision of project implementation and monitoring for Pilot Projects. The results of supervision and monitoring will be submitted to the JICA Study Team.

With respect to farmers' organization for implementation of project, as mentioned in chapter 7, farmer's participation also becomes one of the most important factors in the case of implementation of Pilot Projects. The basic concept for farmers' participation composed of following three components.

- (1) Participation in project implementation
- (2) Farmers' sharing of construction cost
- (3) Operation and maintenance of project by farmers themselves

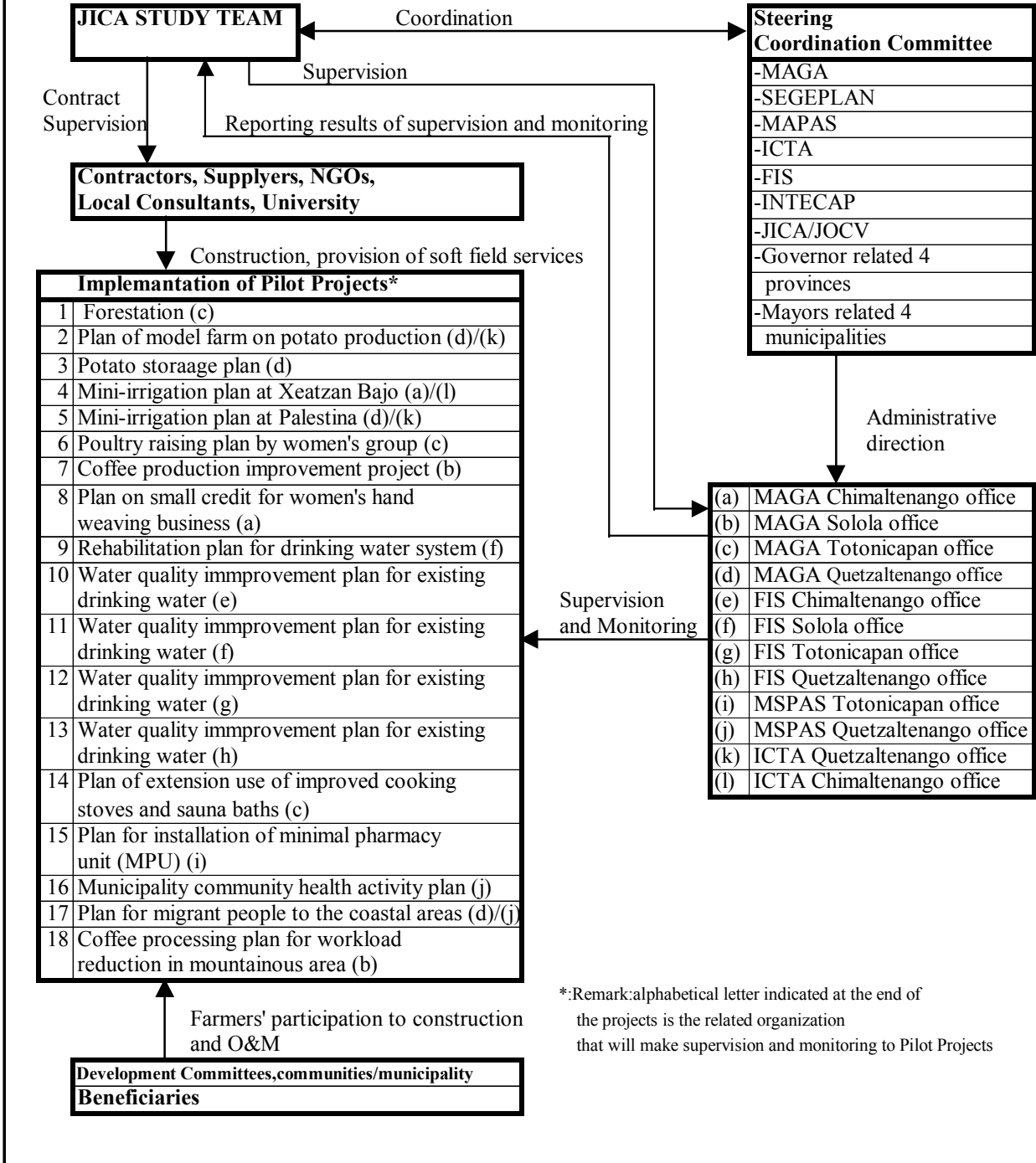
For each Pilot Project, development committee will be made for participation in construction work and O&M work after construction of Pilot Project. In set up of development committee, existing development committee, if any, will be used as much as possible.

With regard to cost sharing, it is planned that the government of Japan will provide a grant for main facilities, training costs and technical guidance. Farmer

side bears provision of labor force and lands necessary for construction of facilities, cost for farm inputs, irrigation facility on farm level and O&M cost of Pilot Project. It is planned that cost necessary for farm inputs, irrigation facility on farm level, and medicines at first cultivation stage will be loaned to beneficiary farmers with no or very low interest rate . After construction of Pilot Project, each development committee will manage it.

Though implementation period of each Pilot Project is different, total period of implementation and monitoring of Pilot Projects will be 15 months. After 15 months, it is expected that monitoring work of each Pilot Project should be also continued

Implementation Organization of 18 Pilot Projects



*:Remark:alphabetical letter indicated at the end of the projects is the related organization that will make supervision and monitoring to Pilot Projects

9. CONCLUSIONS AND RECOMMENDATIONS

- It may be concluded that the peoples in the Central Highland Region of Guatemala seriously suffer from poverty from the view points of low income, poor quality of living environments and devastation of natural resources.
- It may be concluded that the methodology of the participatory survey approach introduced into this Study is very effective in extracting the problems, needs and potentials from the farmers' viewpoints and motivating community people, that are critical factors for the formulation of sustainable bottom-up rural development plans.
- It is recommended that 18 Pilot Projects selected in this Study should be implemented as soon as possible. Through the implementation of the Pilot Projects, countermeasures for problems and constraints should be identified and the methodology of surveys and formulation of project development in this Study should be improved.
- It is proposed that a steering coordination committee headed by MAGA should be established before commencement of the Pilot Projects for their smooth implementation and effective monitoring.
- It is recommended that the implementation of the projects on the sustainable rural development should be carried out for four provinces of Chimaltenango, Sololá, Totonicapán and Quetzaltenango based on the above improved methodology.

TABLES

Table 1 List of Counterpart Personnel and JICA Study Team

Name	Official Position
<u>Counterparts</u>	
Roberto Chávez	Chief Counterpart, MAGA
Juan José Cano	MAGA Coordinator, Chimaltenango province
Mario Roberto Gomez	MAGA Coordinator, Chimaltenango province
Rafael Raúl Rodríguez Cojólón	MAGA Coordinator, Chimaltenango province
Carlos Rolando Santos Girón	MAGA Coordinator, Chimaltenango province
Juan Gerardo Mendez G.	MAGA Coordinator, Sololá province
Cristobal Antonio Márquez Artero	MAGA Coordinator, Sololá province
Orlan Rodas de León	MAGA Coordinator, Totonicapán province
Jorge Guevara Santos	MAGA Coordinator, Quetzaltenango province
Oliverio B. Portillo Méndez	MAGA, Development management Division
Oscar César López Maldonado	PLAMAR
Mario Norberto López Rodríguez	PLAMAR
<u>JICA Experts</u>	
Kenjiro Onaka	Team leader
Koh Watanabe	Expert for participatory development
Yuji Hatakeyama	Environmental expert
Toru Ide	Environmental expert
Yusuke Goto	Environmental expert
Yasuo Aonishi	Sociologist
Luis Rosado	Agronomist
Makoto Yamada	Marketing and agricultural processing expert
Fumiaki Murakami	Infrastructure engineer
Katsuya Kamisato	Infrastructure engineer
Junichi Usami	Infrastructure engineer
Saeko Ichikawa	Health expert
Minako Kakuma	Health expert
Ronald Castellanos	Health expert
Ayako Nishiwaki	Expert for participatory development and gender
Michinori Yoshino	Logistic coordinator

Table 2 Land Use and Classification of Poverty Based on the FIS Criteria for Chimaltenango Province

No.	Name of Municipality	Indicator of Poverty	Classification of Poverty:*	Evaluation for Poverty	Land Use	Evaluation for Land Use	Limitation of Uptake of Water**	Evaluation for Uptake Water	Overall Evaluation
1	Chimaltenango	12.83	d	No	Maize, Frijol, Vegetables	Yes	No	Yes	No
2	San Jose Poaquil	12.74	d	No	Maize, Frijol, Vegetables, Coffee	Yes	No	Yes	No
3	San Martin Jitotepeque	16.74	c	Yes	Coffee, Maize, Frejol	No	No	Yes	No
4	Comalapa	19.8	c	Yes	Maize, Frijol, Vegetables	Yes	Yes	No	No
5	Santa Apolonia	13.65	d	No	Maize, Frijol, Vegetables	Yes	No	Yes	No
6	Tecpan Guatemala	12.8	d	No	Maize, Frijol, Vegetables	Yes	Parcialy	Yes	No
7	Patzun	17.95	c	Yes	Maize, Frijol, Vegetables	Yes	Parcialy		Yes
8	Pochuita	16.91	c	Yes	Coffee, Maize, Frejol	No	No	Yes	No
9	Patzicia	29.59	b	No	Maize, Frijol, Vegetables	Yes	Yes	No	No
10	Santa Cruz de Balanya	21.75	b	No	Maize, Frijol, Vegetables	Yes	Yes	No	No
11	Acatenango	16.66	c	Yes	Coffee, Maize, Frejol	No	No	Yes	No
12	Yepocapa	14.15	d	No	Coffee, Maize, Frejol	No	No	Yes	No
13	San Andres Itzapa	20.46	b	No	Maize, Frijol, vegetables	Yes	Parcialy	Yes	No
14	Parramos	26.73	b	No	Maize, Frijol, Vegetables	Yes	No	Yes	No
15	Zaragoza	17.52	c	Yes	Maize, Frijol, Vegetables	Yes	Yes	No	No
16	El Tejar	10.97	d	No	Maize, Frijol, Vegetables	Yes	No	Yes	No

*: Poverty Classification

a: Extreme poverty, above 30

b: Severe poverty, 20-29.99

c: Regular poverty, 15-19.99

d: Relative poverty, 10- 14.99

e: Low poverty, below 10

** : Chimaltenango province plays an important role in the provision of drinking water to Guatemala city.

Especially water from the basin of the Pixcaya river is the most important. It is considered that adjustment and coordination of water use for drinking water in Guatemala city and agricultural water use in Chimaltenango province are very difficult and municipalities where cover the Pixcaya river basin should be excluded for selection of model microcuencia.

Table 3 List of Micro-basins in Patzun Municipality

Name of River Basin	Number	Name of Microcuenca	Area of Microcuenca (km ²)	Name of aldeas or caserios
Los Chocoyos	C-1	El Llano	4.8	Los Pinos, El Llano, Pacaman
	C-2	Los Pinos	6	Cruz de Santiago
	C-3	Xej	3.7	Xej
	C-4	Los Idolos	8.7	Patzun, Saquiya, Mocolixot Alto, Mocolixot Bajo
	C-5	Chuiquel	5.3	Chisal, Chuiquel, Mocolixot Alto, Mocolixot Bajo
	C-6	Sabalpop	1.2	Sabalpop
	C-8	Pacacquix Bajo	4	Chichoy Alto Paraíso
	C-8	Pacacquix Alto	9.3	Xepatan, Finca Patoquer, Chuchuca Alto, Chuchuca Bajo, Finca Chuiquel, Xeatzan Alto, Xeatzan Bajo
Madre Vieja	M-1	Chichoy	2.7	Chichoy , Chichoy Bajo
	M-2	Paxula	3.1	Chichoy Alto Paraiso,
	M-3	Panibaj	1.6	Chipiactal, Panimaquim
	M-4	Panimaquim	5.2	Panibaj, Chipiactal,
	M-5	Chinimachicaj	8.1	Panimaquim, Chinimachicaj, Chuaquenum
San Jorge	S-1	Xejolon	8.4	Chinimachicaj, Chuaquenum
	S-2	La Vega	14	Xejolon, Popobaj
	S-3	Chicap	4.6	Finca San Rafael la Vega, Finca San Jose Panimache, Finca San Antonio Panimaquim
Nican	N-1	Xetzisi	8.4	Finca Chicap
	N-2	Los Encuentros	2.1	Xetzisi, Xepatan
	N-3		9.2	Los Encuentros
Xaya	X-1	Xaya Alto	8.1	
	X-2	Villa Linda	8.3	Finca San Jorge
	X-3	La Vega	3.6	Villa Linda, Nimaya, Pacoc, Chuchupate, Finca Las
	X-4	Cojobal	2.5	La Vega
	X-5	Las Canoas	4.2	Finca La Sierra, Cojobal
	X-6	La Trompeta	7.2	Las Camalias, Los
	X-7	Las Flores	4	Encuentritos, Finca San
	X-8	Zaren	3.9	Finca San Antonio las Odilias,
	X-9	Pachumulin	2.7	La Trompeta, Trompetilla, La
	X-10	La Pila	1.5	Cienaga, San Lorenzo, Joya de
	X-11	Pena Colorada	3.8	la Ramona

Table 4 Evaluation of Community for Selection of Micro-basins in Chimaltenango Province

Name of Municipality	Name of Community	Indicators for Poverty	Number of Households in Community		Area of River Basin (km ²)	Land Use		Access (length from main road)	Legal Uplake of Water Source	Overlapped by Another Projects	Social Problems		Overlapped Another Municipality	Intention for Cooperation for the Survey by head of Municipality		Intention for Cooperation for the Survey by heads of Adlea or Cacerio	Overall Assessment	
			(no)	Assessment		Kind of crops	Assessment				Yes or No	Assessment		Yes or No	Yes or No			
Patzun	1 Caserio La Trompetilla	19.35	No	-	-	-	-	-	-	-	-	-	-	-	-	-	No	
	2 Caserio El Garabato	18.95	No	-	-	-	-	-	-	-	-	-	-	-	-	-	No	
	3 Caserio Pachut	18.70	No	-	-	-	-	-	-	-	-	-	-	-	-	-	No	
	4 Caserio Popabaj	16.63	No	-	-	-	-	-	-	-	-	-	-	-	-	-	No	
	5 Caserio Chicaman, Villa Patzún	21.00	No	-	-	-	-	-	-	-	-	-	-	-	-	-	No	
	6 Caserio Xatzit, Xepatan	20.61	Yes	8.4	Yes	basic crops+vegetable	Yes	7.4	Yes	No	Yes	No	Yes	-	-	-	Yes	
	7 Aldea Xatzan Bajo	14.76	Yes	9.3	Yes	basic crops+vegetable	Yes	8.2	Yes	No	Yes	No	Yes	Yes	Yes	Yes	Yes	
	8 Caserio Pachumulin	14.47	No	-	-	-	-	-	-	-	-	-	-	-	-	-	-	No
	9 Adlea Pambaj, Pambaj	14.05	Yes	1.6	No	-	-	-	-	-	-	-	-	-	-	-	-	No
	10 Aldea San Jose Xepatan	14.02	Yes	9.3	Yes	basic crops+vegetable	Yes	5.4	Yes	No	Yes	No	Yes	-	-	-	Yes	
	11 Caserio Chaquetum	13.85	No	-	-	-	-	-	-	-	-	-	-	-	-	-	-	No
	12 Caserio Mocolixot Bajo	13.80	No	-	-	-	-	-	-	-	-	-	-	-	-	-	-	No
	13 Aldea Chichoy	13.64	Yes	2.7	No	-	-	-	-	-	-	-	-	-	-	-	-	No

*: not identify this location

Table 5 Land Use and Classification of Poverty Based on the FIS Criteria for Solola Province

No.	Name of Municipality	Indicator of Poverty	Classification of Poverty*	Evaluation for Poverty	Land Use	Evaluation for Land Use	Overall Evaluation
1	Solola	9.67	e	No	Vegetables, Potato, Maize	No	No
2	San Jose Chacaya	12.12	d	No	Potato, Vegetables, Maize	No	No
3	Santa Maria Visitacion	9.07	e	No	Coffee , Potato, Maize	Yes	No
4	Santa Lucia Utatlan	8.09	e	No	Potato, Vegetables, Maize	No	No
5	Nahuala	11.05	d	No	Coffee , Maize, Vegetables, Potato	Yes	No
6	Santa Catarina Ixtahuacan	12.01	d	No	Coffee , Banana, Maize	Yes	No
7	Santa Clara La Laguna	24.76	b	No	Coffee , Maize	Yes	No
8	Conception	45.74	a	No	Vegetables, Potato, Maize	No	No
9	San Andres Semetabaj	14.07	d	No	Maize, Vegetables, Flowers	No	No
10	Panjachel	11.25	d	No	Maize, Vegetables	No	No
11	Santa Catarina Palopo	29.65	b	No	Maize	No	No
12	San Antonio Palopo	31.08	a	No	Coffee , Vegetables	Yes	No
13	San Lucas Tomliman	26.75	b	No	Coffee , Maize, Frejol	Yes	No
14	Santa Cruz La Laguna	23.31	b	No	Coffee , Vegetable, Maize	Yes	No
15	San Pablo La Laguna	39.45	a	No	Coffee , Maize, Vegetables	Yes	No
16	San Marcos La Laguna	36.62	a	No	Maize, Vegetables	No	No
17	San Juan La Laguna	15.16	c	Yes	Coffee , Maize, Vegetables	Yes	Yes
18	San Pedro La Laguna	13.4	d	No	Coffee , Maize, Vegetables	Yes	No
19	Santiago Atitlan	41.9	a	No	Coffee , Maize, Frejol	Yes	No

*: Poverty Classification

a: Exstreme poverty, above 30

b: Severe poverty, 20-29.99

c: Regular poverty , 15-19.99

d: Relative poverty, 10- 14.99

e: Low poverty, below10

Table 6 List of Micro-basins in San Juan La Laguna Municipality

Name of River Basin	Number	Name of Microcuenca	Area of Microcuenca (km2)	Name of aldeas or caserios
Quebrada Seca	Q-1	San Juan La Laguna	9.9	Pueblo San Juan La Laguna
Yatza	Y-1	Paquib/Palestina	2.8	Part of Paqub and Palestina
	Y-2	Palestina	3.2	Palestina
	Y-3	Panyevar	5.7	Aldea Panyevar
	Y-4	Pasajquim	5.8	Pasajquim
	Y-5	right of Yatza	3.2	-

Table 7 Evaluation of Community for Selection of Micro-basins in Solola Province

Name of Municipality	Name of Community	Indicators for Poverty		Number of Households in Community		Area of River Basin (km ²)		Land Use		Access (length from main road)		Legal Uptake of Water Source	Overrapped by Another Projects		Social Problems		Overrapped Another Municipality		Intention foro Cooperation for the Survey by head of Municipality		Intention for Cooperation for the Survey by heads of Adlea or Caserio		Overall Assessment		
		(no)	Assess ment	(km2)	Assess ment	Kind of crops	Assess ment (km)	Assess ment	Yes or No	Yes or No	Assess ment	Yes or No	Yes or No	Yes or No	Yes or no	Yes or no	Yes or Assessment	Yes or Assessment	Yes or Assessment	Yes or Assessment	Yes or Assessment	Yes or Assessment	No	Yes	
1 San Juan La Laguna	1 Pueblo San Juan La Lagun	585	No	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	No	Yes
	2 Panyeyar	206	Yes	5.8	Yes	Coffee +Basic crops	6	Yes	6	Yes	Yes	Yes	No	Yes	No	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	

Table 8 Land Use and Classification of Poverty Based on the FIS Criteria for Totonicapan Province

No.	Name of Municipality	Indicator of Poverty	Classification of Poverty*	Evaluation for Poverty	Land Use (%) and Rank**	Overall Evaluation
1	Totonicapan	7.6	e	No	54% (4)	No
2	San Cristobal Totonicapan	16.15	c	Yes	27% (7)	No
3	San Francisco El Alto	14.35	d	No	28% (6)	No
4	San Andres Xecul	15.81	c	Yes	15% (8)	No
5	Momostenango	15.24	c	Yes	45% (5)	No
6	Santa Maria Chiquimula	18.02	c	Yes	61% (3)	Yes
7	Santa Lucia La Reforma	37.45	a	No	66% (2)	No
8	San Bartolo	13.11	d	No	70% (1)	No

*: Poverty Classification

a: Extreme poverty, above 30

b: Severe poverty, 20-29.99

c: Regular poverty, 15-19.99

d: Relative poverty, 10- 14.99

e: Low poverty, below 10

** : Rate of coverage by forests and ranks

Table 9 List of Micro-basins in Santa Maria Chiquimu Municipality (1/2)

Name of River Basin	Number	Name of Microcuenca	Area of Microcuenca (km2)	Name of aldeas or caserios
Alajsimier	A-1	No	7.1	No
Pacaranat*	P-1	Chiaj	9.9	Chiaj
	P-2	No	1.9	No
	P-3	Chicastro	6.9	Chicastro
	P-4	Patzam	4.2	Patzam Chipu
Tzancorral	T-1	Chuijom	5.2	Chuijom
Sajcoclaj	S-1	No	2.7	No
	S-2	Pamesabal	1.9	Pamesabal
Pachac	PC-1		7.7	No
	PC-2	Racana	7.3	Xocol Racana
	PC-3	Camaja	4.9	Camaja Xesuc Cipo
	PC-4	Chicaxul	3.9	Chicaxul Chuicabaj Chuecutinez
	PC-5	Chuiaj	8.1	Chuiaj Part of Santa Maria Chiquimula
	PC-6	El Rancho	5.9	Pamaxcolabaj Chuinatux Patzichaj Chuitacaj
	PC-7	Chuisena	4.5	Chuisena Chuisela Xeabaj
	PC-8	Xesana	9.1	Xesana Sanjuyup Chimisiya
	PC-9	Pachum	10.5	Pachum
	PC-10	Chuitacabaj	5.9	Chuibacabaj Chuanovez

Table 9 List of Micro-basins in Santa Maria Chiquimu Municipality (2/2)

Name of River Basin	Number	Name of Microcuenca	Area of Microcuenca (km2)	Name of aldeas or caserios
Sacmequena	PC-SAC-1	Chuichipop	1.4	Chuichipop
	PC-SAC-2	Ximulul	5.7	Ximulul Xesiquel Chuichac
	PC-SAC-3	Sacxoc	5.5	Sacxoc
	PC-SAC-3	Pugertinamint	2.8	Pugertinamint
	PC-SAC-4	Chuisiguan	1.9	Chuisiguan
	PC-SAC-5	Chuijoj	1.9	Chuijoj
	PC-SAC-6	Xebe	8.5	Tzansiguan Xetulup Xebe Tuluxan Chilux Patulup
	PC-SAC-7		11.7	Chinibajuyup Xotepe Xecachelaj Carorillo Chileon Tzununux
	PC-SAC-8		10.9	No
Sacbaj	SA-1	Choacorrall	13.1	Pansac Chivisicaja Choacorrall
	SA-2	Xejuyup	0.8	Xejuyup
	SA-3	Chimejia	6	Chimejia
	SA-4	Paxan	7.3	Paxan
Tzununa	TZN-1	Tzununa	5.3	Tzununa Xecaquix
	TZN-2	Pacomontux	4.2	Pacomontux
	TZN-3	Casa Blanca	7.1	Xecaja Xolabix Casa Blanca
	TZN-4	Chuachituj	7	Chuachituj
	TZN-5	Chuiabaj	2.9	Chuiabaj
	TZN-6	Pachoc	7.8	Tzansibiche Pachoc
	TZN-7	Chuijox	9.1	Chuijox Panabesac Papuerta Pachiyut Las Trojadas
	TZN-8	Panimajiox	6.6	Panimajiox
	TZN-9	Chomazan	6.6	Chomazan Aprisco chuipachec

Table 10 Evaluation of Community for Selection of Micro-basins in Totonicapan Province

Name of Municipality	Name of Community		Indicators for Poverty		Number of Households in Community		Area of River Basin (km ²)		Land Use		Access (length from main road)	Legal Utlake of Water Source	Overrapped by Another Projects		Social Problems		Overrapped Another Municipality		Intention for Cooperation for the Survey by head of Municipality		Intention for Cooperation for the Survey by heads of Adlea or Caserio		Overall Assessment	
	(no)	Assessment	(km2)	Assessment	Assessment	Assessment	Assessment	Assessment	Assessment	Assessment			Assessment	Assessment	Assessment	Assessment	Assessment	Assessment	Assessment	Assessment	Assessment	Assessment		Assessment
Santa Maria Chiquimula	1	Caserio Chuitacabaj	32	No	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	2	Caserio Chijoj	61	Yes	1.9	No	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	3	Caserio Chuiipop o Chijoj	57	Yes	1.4	No	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	4	Caserio Chipu	50	Yes	4.2	Yes	Yes	8	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	
	5	Caserio Xejuyub	83	Yes	0.8	No	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	6	Caserio Chuisiguan	17.20	Yes	2.8	No	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	7	Aldea Xecaja	39	No	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	8	Caserio Pachum	68	Yes	10.5	Yes	Yes	5.5	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	
	9	Caserio Chicaxul	63	Yes	3.9	Yes	Yes	4.6	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	
	10	Caserio Paxan	62(25)	No	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	11	Caserio Pamesabal	40	No	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	12	Caserio Chuisabojo	44	No	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	13	Caserio Chuitabaj	30	No	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Table 11 Land Use and Classification of Poverty Based on the FIS Criteria for Quetzaltenango Province

No.	Name of Municipality	Indicator of Poverty	Classification of Poverty*	Evaluation for Poverty	Land Use	Evaluation for Land Use	Overall Evaluation
1	Quetzaltenango	11.13	d	No	Maize, Vegetable, Potato	No	No
2	Salcája	12.05	d	No	Maize, Fruits	No	No
3	Olintepeque	12.62	d	No	Maize	No	No
4	San Carlos Sija	7.87	e	No	Maize	No	No
5	Sibilia	4.92	e	No	Maize,	No	No
6	Cabrcan	9.64	e	No	Maize, Fruits	No	No
7	Cajola	42.16	a	No	Maize, Fruits	No	No
8	San Miguel Sigüila	24.57	b	No	Maize	No	No
9	Ostuncalco	14.34	d	No	Maize, Fruits, Potato	No	No
10	San Mateo	22.63	b	No	Maize, Potato, Fruits	No	No
11	Concepcion Chiquirichapa	12.5	d	No	Maize, Potato	No	No
12	San Martín Sacatepequez	14.26	d	No	Potato, Maize, vegetables	No	No
13	Almolonga	12.06	d	No	Vegetables, Maize	No	No
14	Cantel	8.75	e	No	Maize, Fruits	No	No
15	Huitán	11.02	d	No	Maize, Fruits	No	No
16	Zunil	12.81	d	No	Maize, Vegetables	No	No
17	Colomba	24.83	b	No	Coffee, Maize	No	No
18	San Francisco La Unión	16.99	c	Yes	Maize	Yes	No**
19	El Palmar	22.58	b	No	Coffee, Maize	No	No
20	Coatepeque	13.66	d	No	Pasture, Sugar, Maize, Rice, Coffee, Rubber	No	No
21	Genova	30.39	a	No	Pasture, Maize, Coffee, Rice, Oil palm, Rubl	No	No
22	Flores Costa Cuca	19.66	c	Yes	Coffee, Maize	No	No
23	La Esperanza	10.49	d	No	Maize, Fruits	No	No
24	Palestina De Los Altos	15.27	c	Yes	Maize	Yes	Yes

** : An average of poverty in San Francisco La Unión municipality indicates "c" and Maize in land use, however, there are no communities having "c" in poverty as shown below: Then this municipality was evaluated as no and eliminated.

Name of Community	Indicator of Poverty	Classification
Pueblo San Francisco la Uni	60.99	a
Pala	9.26	e
Xcaj	8.42	e
Tzanjuyu	7.72	e
Chuestancia	6.48	e

*: Poverty Classification

a: Exstreme poverty, above 30

b: Severe poverty, 20-29.99

c: Regular poverty , 15-19.99

d: Relative poverty, 10- 14.99

e: Low poverty, below10

Table 12 List of Micro-basins in Palestina de Los Altos Municipality

Name of River Basin	Number	Name of Microcuenca	Area of Microcuenca (km2)	Name of aldeas or caserios
Turbala	T-1	Tuimuj	2.6	Tuimuj
	T-2	El Carmen	2.3	El Carmen El Carmen-2 Altamira
	T-3	San-Ishidro	3.2	San-Ishidro Cabrera Loz Perez
	T-4	El Socorro	1.3	El Socorro Los Marroquiness Buena Vista Roble Grande
	T-5	Los Gonzalez	2.5	Los Gonzalez Pueblo Palestina de Los Alto
	T-6	El Desierto	9.3	El Desierto Los Laureles
Palana	P-1	El Eden	2.7	El Eden Sinai
	P-2	Mira Pena	3.3	Mira Pena
Patzacan	PZ-1	Las Delicias	2.1	Las Delicias Buenos Aires
Ixchol	IX-1	Toj Guabil	4.1	Toj Guabil Toj chol Asuncion

Table 13 Evaluation of Community for Selection of Micro-basins in Quetzaltenango Province

Name of Municipality	Name of Community	Indicators for Poverty		Number of Households in Community		Area of River Basin (km ²)	Land Use		Access (length from main road)	Legal Utlake of Water Source	Overrapped by Another Projects		Social Problems		Overrapped Another Municipality		Intention for Cooperation for the Survey by head of Municipality		Intention for Cooperation for the Survey by heads of Adlea or Caserio		Overall Assessment	
		(no)	Assessment	Assessment (km2)	Assessment		Kind of cropment	Assessment (km)			Yes or No	Assessment	Yes or No	Assessment	Yes or No	Assessment	Yes or No	Assessment	Yes or No	Assessment		Yes or No
1 Palestina De Los Altos	1 Caserio Tojguabil	19.90	Yes	-	Yes	basic crops	Yes	less 1	Yes	Yes	No	Yes	No	Yes	No	-	-	-	-	-	No	
	2 Caserio Los Marroquines	19.52	Yes	1.5	Yes	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	No
	3 Caserio El Socorro	15.46	Yes	"	No	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	No
	4 Aldea El Carmen	16.58	No	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	No
	5 Caserio Los Cabrera o Molinos Los Ca	17.66	Yes	3.2	Yes	basic crops	Yes	less 1	Yes	Yes	No	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	6 Caserio SanIsidro o Los Diaz	15.59	"	"	Yes	basic crops	Yes	less 1	Yes	Yes	No	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	7 Caserio Los Perez	18.75	"	"	Yes	basic crops	Yes	less 1	Yes	Yes	No	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Table 14 Procedure of the Participatory Study

Steps	Activities	Contents	Output at each stage	Final Output
<div style="border: 1px solid black; padding: 5px; text-align: center;">Explanation of Study Procedure (Opening)</div>	1) Public Meeting-I	<ul style="list-style-type: none"> - Explanation of objectives, outline, procedure of the study. - Request cooperation of community members. 	-	<u>1. Community Profile</u> 1) Socio-economy 2) Agriculture & Livestock 3) Infrastructure 4) Environment 5) Health & Sanitation 6) Resource Map 7) Problem Analysis 8) Objective Analysis 9) Proposed Approach
<div style="border: 1px solid black; padding: 5px; text-align: center;">Study on Present Situation</div>	1) Key-informant Interview 2) Questionnaire Survey	<ul style="list-style-type: none"> - Interview with 5-10 key-informants with semi-structured interview. - Interview with 10-20 households with using simple questionnaire. 	<ul style="list-style-type: none"> - Brief community profile (draft) - List of problems and needs 	
<div style="border: 1px solid black; padding: 5px; text-align: center;">Identification of Problems & Needs</div>	1) Public Meeting-II, III (by gender, by age group) 2) Public Meeting-IV (by all members)	<ul style="list-style-type: none"> - Identification of problems and needs - Consensus on problems and needs - Ranking of needs - Selection of representatives 	<ul style="list-style-type: none"> - List of problems & needs with ranking - List of representatives 	<u>2. Activity Report</u> 1) Key-informant Interview 2) Questionnaire Survey 3) Field Inspection 4) Public Meeting (I)-(V) 5) Representative Meeting (I)-(II)
<div style="border: 1px solid black; padding: 5px; text-align: center;">Investigation of Problems, Needs & Potentials</div>	1) Field Inspection with representatives 2) Representative Meeting-I	<ul style="list-style-type: none"> - Confirmation of problems and potentials through site inspection - Preparation of Resource Map - Marketing condition in/around the cuenca - Environmental impact in/around the cuenca - Problem analysis 	<ul style="list-style-type: none"> - List of confirmed problems & needs - Resource map - Problem trees 	
<div style="border: 1px solid black; padding: 5px; text-align: center;">Investigation of Solutions</div>	1) Representative Meeting-II 2) Public Meeting -IV (by all members)	<ul style="list-style-type: none"> - Alternative (Approach) analysis - Consensus on approaches - Ranking of the approaches 	<ul style="list-style-type: none"> - Objective trees with approaches 	

Table 15 People's Participation in Survey Activities

Activities	Xeatzan Bajo			Panyevan			Pachum			Palestina			
	Date	Participants		Date	Participants		Date	Participants		Date	Participants		
		Male	Female		Total	Male		Female	Total		Male	Female	Total
Public Meeting													
1. Public Meeting I	07/18	150	90	240	07/17	80	80	160	07/19	-	95	95	190
2. Public Meeting II	07/31	140	80	220	07/26	94	84	178	08/02	-	63	132	195
3. Public Meeting III	08/01	155	135	290	07/27	101	71	172	08/08	-	54	99	153
4. Public Meeting IV	08/07	125	120	245	08/01	106	97	203	08/16	-	52	89	141
5. Public Meeting V	08/28	90	80	170	08/09	88	71	159	08/30	-	57	101	158
Average Participation		132	101	233.0		93.8	80.6	174.4			64.2	103.2	167.4
Number of Households				325				360					297
Participation Rate (%)				71.7				48.4					56.4
Other Activities													
1. Key-informant Interview	7/19~21	15	3	18	7/18~20	8	4	12	7/25~26	-	22	8	30
2. Questionnaire survey	7/24~28	-	-	30	7/20~23	29	2	31	7/21~8/1	-	108	15	123
3. Representative Meeting I	08/24	20	10	30	08/04	17	7	24	08/23	-	19	11	30
4. Representative Meeting II	08/25	19	6	25	08/07	20	9	29	08/23	-	19	11	30

Activities	Los Cabrera/Morales			Los Diaz/Sector I			Los Perez						
	Date	Participants		Date	Participants		Date	Participants					
		Male	Female		Total	Male		Female	Total	Male	Female	Total	
Public Meeting													
1. Public Meeting I	07/21	30	35	65	07/21	30	40	70	07/20		35	20	55
4. Public Meeting II	08/04	14	54	68	08/03	21	50	71	08/02		28	28	56
5. Public Meeting III	08/09	17	17	34	08/10	24	43	67	08/11		13	39	52
6. Public Meeting IV	08/16	16	33	49	08/17	18	32	50	08/18		18	24	42
9. Public Meeting V	09/13	12	37	49	09/12	27	40	67	09/11		18	24	42
Average Participation		17.8	35.2	53		24	41	65			22.4	27	49.4
Number of Households				83				107					107
Participation Rate (%)				63.9				60.7					46.2
Other Activities													
2. Key-informant Interview	7/28-29	7	3	10	7/26-27	7	3	10	7/24-25		8	2	10
3. Questionnaire survey	7/31-8/1	39	3	42	8/2-3	43	11	54	8/4-7		26	1	27
7. Representative Meeting I	08/22	7	3	10	08/22	6	5	11	08/22		6	3	9
8. Representative Meeting II	08/22	7	3	10	08/22	6	5	11	08/22		6	3	9

Table 16 Monitoring Indicators and Organization of the Implementation and Management of the Projects (1/3)

No.	Name of the Project	Monitoring Indicators		Organization of monitoring
		condition of before implementation of the project	condition after implementation of the project	
Environment and Conservation Plans				
a-1	Restoration plan of the collapsed lands	<ol style="list-style-type: none"> 1. Progress of completion of construction 2. Qualitative monitoring soil erosion 3. Farmer's participation rate 	<ol style="list-style-type: none"> 1. Growth rate of trees 2. Soil amounts to be eroded 	An environmental committee in the community A executing office
a-2	Soil Conservation plan for steep farm lands	<ol style="list-style-type: none"> 1. Progress of completion of construction 2. Farmer's participation rate 	<ol style="list-style-type: none"> 1. Growth rate of crop 2. Soil amounts to be eroded 	An environmental committee in the community An executing office
a-3	Forestation plan	<ol style="list-style-type: none"> 1. Progress of completion of construction 	<ol style="list-style-type: none"> 1. Growth rate of trees 2. No. of participant for forestation and training programs 	An environmental committee in the community An executing office
a-4	Agro-forestry development plan	<ol style="list-style-type: none"> 1. Farmer's participation rate 2. Progress of completion of construction 	<ol style="list-style-type: none"> 1. Growth rate of crops and trees 2. No. of participation for tree planting and training programs 	An environmental committee in the community An executing office
a-5	Management plan of water quality	–	<ol style="list-style-type: none"> 1. Content of toxicity materials in water 	Municipality office
a-6	Solid wastes treatment plant	<ol style="list-style-type: none"> 1. Progress of completion of construction 	<ol style="list-style-type: none"> 1. Quantity of solid wastes 2. Amount of produced composts 3. Financial status of a executing committee 	An committee in the municipality A municipality office An executing office
Plans for Increasing Income Generation				
b-1	Plan for making composts	<ol style="list-style-type: none"> 1. Progress of completion of construction 	<ol style="list-style-type: none"> 1. Production cost of compost per ton 2. Production of composts 3. Financial statement 	A municipality office An executing office
b-2	Plan of model farm on potato production	<ol style="list-style-type: none"> 1. Progress of completion of implementation 	<ol style="list-style-type: none"> 1. Number of farmer's visitors 	An executing committees in the municipality An executing office
b-3	Potato storage plan (a) farmer's level	<ol style="list-style-type: none"> 1. Progress of completion of construction 	<ol style="list-style-type: none"> 1. Price of potatoes 2. Yield of potatoes 	A executing committee in the community An executing office
	Potato storage plan (a) commercial level	<ol style="list-style-type: none"> 1. Progress of completion of construction 	<ol style="list-style-type: none"> 2. Amount damaged during storage period and quality of potatoes 	An executing committee in the municipality
b-4	Potato processing plan	<ol style="list-style-type: none"> 1. Progress of completion of construction 	<ol style="list-style-type: none"> 1. Price of potatoes 2. Quality of potatoes 3. Financial statement 	A municipality office An executing office
b-5	Mini-irrigation plan	<ol style="list-style-type: none"> 1. Progress of completion of construction 	<ol style="list-style-type: none"> 1. Production cost 2. Financial statement 	Cooperatives in the community An executing office
	Payer-chicken Raising Plan	<ol style="list-style-type: none"> 1. Progress of completion of construction 2. Farmer's participation rate for provision of labor force for construction 	<ol style="list-style-type: none"> 1. Net benefits 2. Collection Rate of water charge 	Irrigation committee in the community An executing office
b-6	Payer-chicken Raising Plan for women's groups	<ol style="list-style-type: none"> 1. Progress of completion of construction 	<ol style="list-style-type: none"> 1. Status for raising 2. Amount of eggs and sales eggs and net profit of cooperatives 	Women' cooperative in villages An executing office

Table 16 Monitoring Indicators and Organization of the Implementation and Management of the Projects (2/3)

No.	Name of the Project	Monitoring Indicators		Organization of monitoring
		condition of before implementation of the project	condition after implementation of the project	
b-7	Project for improvement of coffee plantation	1. Progress of completion of construction	1. Growth rate of coffee seedlings 2. Areas that replanted by new seedlings 3. Number of farmers who use composts and improved technical methods 4. Yield of coffee and other cash orchard trees 5. Financial statement of cooperative	A coffee farmer's cooperative in the community An executing office
b-8	Coffee processing plan	1. Progress of completion of construction	1. Total amount of coffee bean to be pulped 2. Rate of milling 3. Financial statement of cooperative	Coffee processing cooperatives in the community An executing office
b-9	Agro-processing development plan	1. Progress of completion of construction	1. Total production 2. Amount of sales of production 3. Financial statement of cooperatives	Agro-processing farmer's cooperatives in the community An executing office
b-10	Plan of direct sale of vegetables	1. Progress of completion of construction	1. Total amount of agricultural products to be dealt with 2. Price of agricultural products to be dealt with	Crop production cooperatives in the community An executing office
b-11	Improvement plan for maize threshing	1. Consumed time to be threshed for maize by traditional method	1. Consumed time to be threshed for maize by threshing equipment	A committee in the community An executing office
b-12	Institutional plan for fostering nucleus farmers	1. Progress of completion of implementation	1. Number of meetings 2. Improvement of capacity of nucleus farmers	A nucleus farmer committee in the community An executing office
b-13	Plan of Revolving fund for hand weaving thread	1. Progress of completion of implementation	1. Amount of sales and stock of thread 2. Financial status of committee 3. Reduction of production costs	Cooperatives An executing office
Improvement plan for living environments				
c-1	Rehabilitation plan of roads in the village	1. Progress of completion of construction		A road committee in the community/ an executing office
c-2	Rehabilitation plan of regional roads	1. Progress of completion of construction		Ministry concerned
c-3	Plan of rural electricity	1. Progress of completion of construction	1. Collection rate of electric charge	A electric and energy committee in the community/an executing office
c-4	Rehabilitation plan for drinking water system	1. Progress of completion of construction	1. Collection rate of water charge 2. Frequency and duration of suspension of water supply	Water committee in the community An executing office
c-5	Water quality improvement plan for the existing drinking water supply system	1. Progress of completion of construction	1. Number of users 2. Status of water treatment system 3. Number of diarrhea patients 4. No. of colon bacillus in potable water	Water committee in the community An executing office
c-6	Plan of extension use of improved cooking stoves and of Sauna bath "Tamascafi"	1. Consumption of wood fuel	1. Farmer's perception 2. Consumption of wood fuel	A committee in the community
c-7	Plan of provision toilette facilities	1. Progress of completion of construction	1. Status of facilities	A committee in the community

Table 16 Monitoring Indicators and Organization of the Implementation and Management of the Projects (3/3)

No.	Name of the Project	Monitoring Indicators		Organization of monitoring
		condition of before implementation of the project	condition after implementation of the project	
c-8	Plan of night time health education			Health committees in the community/an executing office
c-9	Plant medicine growing plan	1. Progress of completion of construction	1. Number of participants 2. Amount of sales of production 3. Financial status	Health guards in the community An executing office
c-10	Improvement plan of service quality given to Comadronas	1. Progress of completion of implementation	1. Maternal mortality rate 2. Number of patients	Comadronas , Health committees in the community An executing office
c-11	Plan for installation of minimal phaararmacy unit (MPU)	1. Progress of completion of implementation	1. Kind and amount of drug to be sold and stocked 2. Profit in MPU 3. Accounting status of MPU 4. Budget use in health committee	A health committee in the community MPU An executing office
c-12	Integrated community health activity Plan	1. Progress of completion of implementation	1. Kind and amount of drug to be sold and stocked 2. Profit in MPU 3. Accounting status of MPU 4. Budget use in health committee	A health committee in the community MPU A municipality office An executing office
c-13	Plan for immigrant people to the coastal areas	1. Progress of completion of implementation	1. % of farmers contaminated by agricultural chemicals 2. Number of diarrhea patients	A committee in the community An executing office
c-14	Plan for reducing work load in the mountainous area through coffee processing	1. Progress of completion of implementation	1. Income of beneficiaries 2. Processed amount of coffee and milling rate	A committee in the community An executing office