

Final Evaluation Report

COMMUNITY-BASED LIVELIHOOD IMPROVEMENT PROJECT

Funded by Food Security Initiatives Fund -
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Implemented by CEDAC-CESVI

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List of abbreviation

CEDAC	: Centre d'Etude et de Développement Agricole Cambodgien
CESVI	: Cooperazione e Sviluppo
CIDA	: Canadian International Development Agency
CLIP	: Community Based Livelihood Improvement Project
FSIF	: Food Security Initiatives Fund
HH	: Household
Kg	: Kilogram
N/A	: Non-Applicable or Not Available
Nb.F	: Number of farmer family
R&D	: Research and Development
SfR	: Saving for Self-Reliance
SRI	: System of Rice Intensification
THI	: Total Household Interviewed
VBA	: Village Based Animator

Executive Summary

Community Based Livelihood Improvement Project (CLIP) is a 24-month CIDA funded project implemented by CEDAC-CESVI in Roler B'ier district, Kampong Chhnang province. CLIP was officially started in July 01, 2005 and will be ended in June 30, 2007. The project was designed to address two main important issues namely food insecurity and water sanitation. Food insecurity is caused by the low agricultural productivity, limited agricultural diversification and limited income generating activities. Moreover, community people are not organized and lack of mutual support. Children under-five years have faced imbalance dietary regime and are poor in vitamins. Water shortage is caused by the limited financial capital for investment in drilling a pump-well in which it can provide safe water year-round, while low hygiene standard are due to scarce knowledge and wrong behaviors.

The overall goal of this project is to contribute to the social and economic development of rural communities, through a coordinated set of community based livelihood improvement actions in 20 villages of Roler B'ier district. Four specific objectives have been identified namely; 1). to increase household food production and income generation capacity among poor rice farmers. 2). to support the creation and reinforcement of strong farmer organization and networks. 3). to improve access to and use of safe water and 4). to strengthen the knowledge and improve the practices of children's caretakers mainly women-mother with regard to nutrition.

Prior to end of this project, CEDAC-CESVI has requested R&D Department of CEDAC to conduct the final project evaluation which aimed to measure the impacts of the project. An evaluation team of CEDAC-R&D has been mobilized to serve this task. This report is a result of the evaluation exercise which aims to present the study findings on the project impact which was conducted in May 2007.

The study has found that in this two year period, project has brought many results and impact to the community especially to build capacity of local human resources with different aspects: technical aspects (Key Farmers in SRI, Vegetable, Chicken and Fish), social aspect (Farmer association committee, woman group, poorest group...) and financial aspect (Saving group). Moreover, many villagers have learned about health related practices such as factors caused diseases and malnutrition of children. From this knowledge, they have changed their practices such as adopting drinking boiled water or filter water, using soap and hygiene the kitchen and houses. Woman-mothers are also aware of caring the children health and have practiced vegetable growing and make nutritional food for their children. The following are the summary of project impact by the main selected indicator.

Summary project impact by selected main indicators

Types of impact indicators	Unit	Before project	At the present (2005-06)
Rice food insecure population household	%	55	33
Rice food insecure degree in the household	month/year	3-5	3-5
Household gross income from agriculture on average	US\$/hh/year	412	456
New water and sanitation facilities installed + rehabilitated	Nb	-	16 +3
New WS user Group formed and trained			19
Households growing vegetable for home consumption	%	55	85
Households raise chicken	%	85	89
Number of chicken per household	Head/hh	9	15
Rice yield	Kg/ha	2000	3400
Total rice harvest per household	Kg/year	1,446	1,748
Farmer adopting SRI Techniques	Nb.F	-	324
Farmer adopting vegetable growing techniques or practices	Nb.F	-	287

vegetable growing			
Farmers making compost	Nb.F	-	148
Farmers saving natural fertilizer	Nb.F	-	610
Farmer raise chicken or improve chicken raising techniques	Nb.F	-	168
Number of household could grow vegetable for home consumption in year round	%	11	36
Households drink boiled water or filter water regularly	%	41	45
Member of household regular using soap	%	25	65
Percentage of family attending 1st campaign on hygiene and sanitation	%	-	69%
Percentage of women participating in the first campaign	%	-	67%
Percentage of family attending 2nd campaign on hygiene and sanitation	%	-	37%
Percentage of women participation in the second campaign	%	-	79%
Percentage of family attending 3rd campaign on hygiene and sanitation	%	-	40%
Percentage of women participation in the third campaign			72%
Number of women farmer emerge as respected community leader	Nb		59
Percentage of family attending 4th campaign on hygiene and sanitation			36%
Percentage of women participation in the fourth campaign			80%
N. of participant in first nutrition campaign			305
N. of participant in second nutrition campaign			1105
N. of participant in cooking demonstration			667
Number of woman-mother make nutritional food for children	%	-	26%
Understanding on initiative breastfeeding	%	32%	98.8%
Understanding on continuation of breastfeeding	%	47%	80.3%
Understanding on complementary feeding	%	32%	93.6%
Population affected by diseases related to water and sanitation.			
- Diarrheas	%	42%	29%
- Ill with fever	%	68%	44%
Woman participation (30% in water user group formed by PRASAC)	%	30%	More than 70%

From these findings, we would conclude that:

- Project has achieved most of the expected outcomes, especially targeting to the poorest families in the community. However, continuation of this achievement is a subject matter to be discussed. As it is a two-year project, farmer associations are not well-ready to take over the continuation of the development activities.
- There is a need to continue to support to the management committees of the farmer associations in order they can provide the development services to their communities. However, we would expect that other villagers and other communities will be able to learn from the model farms in the communities as well.
- Facilitation of the supply of filter-water pots to community is also needed as this stage most people are aware of the importance of drinking filter-water but they lack of capacity to afford to get it. It is not meant that farmers have no 40,000 riels to purchase it but the priority to use 40,000 riels in the poor-families will be provided to the productive investment such as purchasing piglet. Thus, they will leave the purchasing filter-water pot as less priority.

Last but not least, for the sustainability of the project achievement, we would suggest that project should find additional support to farmer trainers, farmer association committee, saving group committee, water user group committees...etc. so that they will be able to scale up the project achievement in the future.

I. Introduction

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Prior to end of this project, CEDAC-CESVI has requested R&D Department of CEDAC to conduct the final project evaluation which aimed to measure the impacts of the project. An evaluation team of CEDAC-R&D has been mobilized to serve this task. This report is a result of the evaluation exercise which aims to present the study findings on the project impact which was conducted in May 2007.

II. Methodology

2.1. Approach of the study

The study uses the sustainable livelihood and food security frameworks to measure and analyze the level of the improvement of the livelihood system of the target group. In the livelihood aspiration: livelihood activities and livelihood outcomes as our center of analysis. Both the outcomes from their production and the collection of the natural resources were considered in the evaluation.

The study also extended the analysis on the social capital (farmer organization and network, and water-well management committee) in order to understand the level of sustainable management of the achievement made during project implementation. In-depth discussion with women-mothers concerning their knowledge and practices on improvement of nutrition for the children also covered in order to understand how project tackle the food insecurity and malnutrition issue.

2.2. Data collection and tools

After meeting with project team and study the project documents, fieldwork has been organized. The fieldwork of this evaluation study was started from 14 to 18 May 2007. Five villages out of 20 old-target villages of the project have been randomly selected. Each village, the study team has conducted three group discussions namely farmer association group, woman group and water-well user group. On average about 20 farmers participated in all the three-group discussion. 100 households have been interviewed which were randomly selected from the list of beneficiaries of the project from the 20 villages.

Actually, Project (agricultural component) has a dataset and baseline but we decide not to use it as the data did not checking errors. While we discussed with project officer (Mr. Lay Reth), we realize that the quality of baseline data is very low. Thus, we decided to use the randomize sample and asked the recall data.

Table 01: List of the village selected for the study

No	Random Number	Name of Villages	Date of Visit	Name of Communes
1	8	Tob Srov	May 16, 2007	Banteay Preal
2	3	Sre Veal	May 16, 2007	Kraing Leav
3	9	Tab Tbeng	May 15, 2007	Banteay Preal
4	19	Kork Sdao	May 17, 2007	Toeuk Hot
5	15	Prey Sampao	May 15, 2007	Brosneb

2.3. Description of household samples

It is found that respondents are the people in middle age about 41 years old. However, there are still few respondents providing interview on behalf of there parents they are about 18 years old. Most of respondents are women as men are busy and left from home for non-farming job opportunity. Most of respondents reported that they are able to read and write. About 22% of respondent is a single-headed family.

Table 02: Sex and relation of respondents

Relation of interviewee in HH (%)	Female	Male	Total
HH head	31	18	49
Spouse	35	1	36
Children	12	3	15
Total	78	22	100

Table 03: Literacy status of respondents

Interviewees	Female	Male	Total
Illiterate (%)	17	2	19
Literate (%)	61	20	81
Total (%)	78	22	100

Table 04: Marital status of respondents

Family status (%)	Female headed household		Male headed household		Total	
	Illiterate	Literate	Illiterate	Literate	Illiterate	Literate
Married	2	3	8	54	10	57
widow/er	7	19	1	3	8	22

Orphan	1	0	0	0	1	0
N/A	1	1	0	0	1	1
Total	11	23	9	57	20	80

III. Analysis of the project impacts

3.1. Impact on livelihood assets

3.1.1. Household human assets

Human resource in the household and capacity of active members are considered as very important in improving the household livelihood. It is found that household composition is relatively small and most active members involving in farming activities. It is to remind that all household interviewed are randomly selected from the list of beneficiary provided by the project. As a result, it is confirmed all household interviewed have received trainings organized by project. Most of household interviewed receiving the trainings on chicken raising, vegetable growing, rice cultivation (SRI) and composting making or saving natural fertilizer (backyard fertilizer).

Table 05: Family members of the household interviewed

Household members composition	Mean	Minimum	Maximum
Total household members	4.5	1	10
Total female members	2.4	1	5
Total members involved in farming	2.9	1	6
Nb of members > 61y	1.2	1	2
Nb of members > 61y in involved in farming	1.2	1	2
Nb of members from 19-60y	2.5	1	5
Nb of members from 19-60y in involved in farming	2.3	1	5
Nb of members from 6-18 y	2.0	1	5
Nb of member from 6-18 in involved in farming	1.6	1	4
Nb of members < 5y	1.3	1	3

Table 06: Attending the technical training organized by project

Technical adaptation	Used to learnt (% of THI)	Used to practice (% of THI)	Practicing rate (%)
Fish raising	67	14	21
Chicken raising	86	47	55
Pig raising	32	20	63
Vegetable	92	68	74
Compost	87	52	60
Saving natural fertilizer	91	73	80
Botanical pesticide	64	12	19
SRI	85	61	72
Other topics	10	8	80

Remark: THI = Total household interviewed

3.1.2. Household physical assets

Land, farm equipment and non-farm equipment are considered as the important physical assets of the household. It is found that about 90% of household interviewed own land on average 1.65ha/hh and part of their land is not used. However, there are few households renting in and renting out of land as well.

Table 07: Land holding of household interviewed

Household owned land		Mean	Minimum	Maximum	% of THI
Residential land (m ² /hh)	Total	2648	200	20000	91
	Being used	2466	20	20000	90
Dry season rice field (ha/hh)	Total	0.81	0.35	2.00	13
	Cultivated	0.80	0.35	2.00	12
Wet season rice field (ha/hh)	Total	0.96	0.03	3.00	85
	Cultivated	0.92	0.03	3.00	83
Upland (ha/hh)	Total	0.30	0.01	1.00	30
	Cultivated	0.30	0.01	1.00	30
Forest land (ha/hh)	Total	0.63	0.01	5.00	35
	Cultivated	0.50	0.01	4.00	14
Other lands (ha/hh)	Total	0.50	0.50	0.50	1
	Cultivated	0.50	0.50	0.50	1
Total HH land (ha/hh)	Total	1.65	0.05	5.53	87
	Being used	1.34	0.05	4.75	88

Remark: HHI = Household interviewed

Table 08: Rent in and rent out of land

Rented land	Mean	Minimum	Maximum	% of THI
Total all rented in lands (ha/hh)	0.17	0.03	0.48	7
Total all rented out lands (ha/hh)	0.19	0.18	0.20	2
Rented in residential land (m ² /hh)	300	300	300	1
Rented in dry season rice land (ha/hh)	0.11	0.03	0.18	2
Rented out dry season rice land (ha/hh)	0.18	0.18	0.18	1
Rented in rainy season rice land (ha/hh)	0.24	0.05	0.48	5
Rented out rainy season rice land (ha/hh)	0.20	0.20	0.20	1
Rented in upland (ha/hh)	0.04	0.03	0.04	2

Concerning the physical assets, 47% of household interviewed own motorbike and about 64% having farming tools (plow and harrow). Remarkably, 22% of household interviewed own water pump.

Concerning the facility for water storage, about 81% of household interviewed have water jar and 64% have water well.

Table 09: Household physical asset of household interviewed

Number of HH physical assets	Mean	Minimum	Maximum	% of THI
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Motorbike	1.1	1	2	47
Bicycle	1.6	1	5	80
Water jar	1.8	1	10	81
Water well	1.1	1	4	64
Plow or harrow	1.4	1	4	64
Tractor or Plowing machine	1.0	1	1	9
Water pump	1.2	1	2	22

3.1.3. Social assets

Among the five villages selected for focus group discussion, there is a farmer association in each village. Each farmer association has developed their association statute and formed a management committee. Each management committee composes of 5-9 members. The management committees have regularly organized their monthly meeting. Each farmer association composes of 22 to 45 members. Most of committees have organized a management committee meeting prior to the monthly meeting of the association, except one association did not do so. In general, each farmer association stands as an umbrella of other groups such as poorest group, young farmer group, water-well user group, woman group, saving group and rice producer group.

Each association has collected a monthly social fund (100 riels/month) and solidarity fund (200 riels/month). All farmer association do saving, in general the average saving is about 1000 to 2000 riels/month. The total saving of each association varies from 1,400,000 up to 2,000,000 riels. Most of members of farmer association used to borrow loans from their associations. On average, each loan is about 150 000 riels with 2-3% monthly interest rate. Most of loans have been used for farm and non-farm investment for income generation and few loans are used for medical care. It is important to note that there is no case of using loans for food consumption.

Concerning to the saving activities, each farmer association have a box for keeping saving money but they have only one lock. The person keeps the box and person keeps key is different, except one village. All the farmer associations use the record book provided by the project (purchase with subsidy money from the project). Most of the management committees can manage and record their savings and loaning well and in the transparent way. For example, each member also has their own-record notes. Saving also has been improved from mandatory saving to voluntary saving. As a result, members of the saving group have increased their saving from 1000 to 5000 riels when they have more incomes.

Since the associations were formed, the mutual help in the villages is increased mainly in the emergency needs or accidents but mainly among the members. During the monthly meeting, farmer associations also use this opportunity to share experiences to each other in the community. Seed exchange in the community among the association members also increased. Each association, there are about 5-6 members have set examples for implementing the agricultural techniques as well as health practices mainly the management committees of the associations or management committees of the group under the umbrella of their associations which can allow other association can come to learn from them or exchange with them.

Three of out five villages have implemented collective actions related to the natural resource conservation such as awareness on fish resource conservation and flooded forest protection, promotion on the earth-worm raising and community forest conservation and providing the training to the community people how to harvest trees in sustainable way. The association also promotes the growing of multi-purpose trees in homestead production.

From the household survey, it helps to confirm the results from group discussion as well. Almost all household interviewed used to participate in the different meeting and discussion in the village which discussing the different issues related to community development and community livelihood improvement. It is important to note that their participation is not only in the events organized by CEDAC but also in the events organized by other institutions as well. Mutual help in the community also has been improved. As a result, 98% of household interviewed have reported that they used to help their villagers and receiving help from other villagers as well. Concerning the financial access, community people mobilize their own financial resources putting together in the group (Saving Group) and loan it to their members. It is important to note that among 46 cases of loans, 25 loans are from the Saving for Self-Reliance (SfR).

Table 10: Mutual help in the village in this year? Yes = 98%

	Mean	% of THI
Total numbers of times they help you	4.5	58
Total money they help you (riel)	541,529	17
Total rice they help you (Kg)	97	18
Total numbers of times you help your neighbors	11.0	90
Total of money you help you neighbors (riel)	78,170	60
Total of rice you help your neighbors (Kg)	35	39

Table 11: Accession of financial assets in the CLIP Project

		Mean	Minimum	Maximum	% of THI
Credit institution	Amount of out-standing loan (riel/hh)	418,571	50,000	1,500,000	7
	Interest rate (%)	3.1	2.0	5.0	
Relatives or neighbors	Amount of out-standing loan (riel/hh)	1,106,000	20,000	6,600,000	10
	Interest rate (%)	5.0	5.0	5.0	
Local private money lender	Amount of out-standing loan (riel/hh)	262,500	150,000	400,000	4
	Interest rate (%)	8.8	5.0	10.0	
Saving group or association	Amount of out-standing loan (riel/hh)	85,000	20,000	400,000	24
	Interest rate (%)	2.5	1.0	3.0	

3.2. Impact on farming activities and outcomes

There are about 450 farmers (represented about 450 households) have learned on SRI (System of Rice Intensification). Among them, 324 farmers have tried SRI techniques. They are very interested in the techniques have been introduced. Based on the result from rice crop-cut, on average, farmers can get 3,4tons/ha from their experimental plots comparing to the conventional practice of rice production, they can harvest 2.6ton/ha on average. However, the baseline of rice production before is about 2ton/ha. On average, each household can increase rice production from 200 Kg to 600 Kg per year due to the fact that the first year of the project, they just tried with small plot and some improvement of other plots only.

There are about 450 farmers (represented about 450 households) have learned on vegetable growing. Among them, 287 farmers have practiced vegetable growing or increased vegetable production and diversified vegetable variety according to their growing seasons. Vegetable growers not only have vegetable for home consumption in year round but also can sell the surplus for cash incomes. On average, each vegetable grower can earn cash incomes from 50,000 riels up to 200,000 riels per year. Some vegetable growers also can earn cash incomes more than one million riels per year.

There are 148 farmers making compost cage and about 610 households have collected the organic manure. As a result, farmers have reduced or stopped using the chemical fertilizer and they can save money from the reduction of chemical fertilizer about 60,000 riels to 90,000 riels per household.

There are about 450 farmers (represented about 450 households) have learned on chicken raising. Among them, 164 farmers have improved chicken raising techniques. Since they have improved their raising techniques, each household, on average, can increase number of chicken from 10-30 heads per year. Moreover, most of them have understood and improved the prevention and protection of Avian Influenza diseases. They have prepared the fence and cleaned the chicken house regularly.

In addition to the group discussion results, household survey has been done and focused on three agricultural productions namely rice production, vegetable production and chicken raising which have been stated in the project document as the target for improvement. As a result, it is found that rice production has increased from 1,446 Kg/hh per year up to 1,748 Kg/hh per year on average. Concerning the vegetable growing, it is not much increased in term of quantity but it increases in term of number of farmers practice vegetable growing for home consumption while chicken raising, there is increased both the production and number of household involved.

Table 12: Improvement on crop production at household level

		Mean	Minimum	Maximum	% of THI
Rice production (Kg / HH)	Before project	1,446	120	9,000	90
	Present 2006-07	1,748	140	10,600	91
Vegetable production (Kg/HH)	Before project	293	5	2,000	72
	Present 2006-07	303	10	2,500	82

Table 13: Improvement on chicken raising of the household interviewed

	Mean	Minimum	Maximum	% of THI
Nb sold in one year before the project (head/hh)	14.6	2	50	72
Income gained in one year before the project (riel/hh)	146,250	20,000	500,000	72
Nb being raised this year (head/hh)	15.3	1	60	89
Nb sold in this year (head/hh)	15.1	3	60	65
Income gained this year (riel/hh)	150,923	30,000	600,000	65

Table 14: Annual farming incomes before and after project

	Mean	Minimum	Maximum	% of THI
Annual cash income from agriculture at the present	1,822,691	33,000	9,393,300	98
Annual cash income from agriculture before project	1,646,763	60,000	10,050,000	96

3.3. Impact on household incomes from non-farming activities

It is found that 73% of household interviewed involving in non-farming activities. Sugar palm production is a main non-farming activities in this area which can bring about one million riels of incomes per year household. Incomes from natural fishing are significantly decreased while selling labor is significantly increased.

Table 15: Involvement and incomes from non-farming activities of household interviewed

Income from non-farming activities in this year	Mean	Minimum	Maximum	% of THI
Business and services in this year				73
Repairing motorcycle	360,000	50,000	670,000	2
Grocery	923,333	300,000	2,920,000	6
Palm sugar production	941,563	100,000	4,000,000	24
Small or petty trade	750,750	200,000	3,000,000	10
Motor-taxi service	500,000	500,000	500,000	1
Transport of goods and other	441,333	24,000	1,000,000	3
Threshing machine service	1,200,000	600,000	2,000,000	3
Rice milling machine service	600,000	50,000	2,500,000	9
Government staff salary	638,583	5,000	2,880,000	12
Other business and services	925,817	1,000	4,800,000	30

Table 16: The involvement and incomes from natural fishing

Natural fishing		Mean	Minimum	Maximum	% of THI
One year before the project	For consumption (kg/hh)	122	3	790	64
	For sales (kg/hh)	141	2	750	18
	Income (riel/hh)	635,750	9,000	3,375,000	18

This year 2006-07	For consumption (kg/hh)	82	3	670	70
	For sales (kg/hh)	117	1	600	13
	Income (riel/hh)	587,308	5,000	3,000,000	13

Table 17: Involvement of household interviewed in selling labors

Selling labors		Mean	Minimum	Maximum	% of THI
Sell labor in this year 2006-07					58
Sell labor in farming activities (back home)	Total man-day	25	3	75	27
	Wage (riel/day)	5,278	500	30,000	27
	Total income (riel/hh)	155,278	10,000	1,350,000	27
Sell labor in non-farming activities (back home)	Total man-day	41	6	300	26
	Wage (riel/day)	6,119	3,000	25,000	26
	Total income (riel/hh)	249,115	24,000	1,350,000	26
Sell labor in farming activities (stay at the work place)	Total man-day	19	5	60	10
	Wage (riel/day)	4,290	400	9,000	10
	Total income (riel/hh)	64,650	7,500	240,000	10
Sell labor in non-farming activities (stay at the work place)	Total man-day	198	10	365	21
	Wage (riel/day)	9,410	2,500	25,000	21
	Total income (riel/hh)	1,844,143	75,000	9,125,000	21

3.4. Impact on improvement of nutrition and health status

3.4.1. Household food consumption

Concerning the vegetable growing for home consumption, it is reported that before project there was only 11% of household interviewed have vegetable from their own production for home consumption year-round while at the present number of household could grow vegetable for home consumption in year round has increased up to 36%.

Concerning the shortage of rice for home consumption before and after the project is almost the same but the number of farmers who have shortage of rice is significantly decreased (before project: 55%, At the present: 33%). The same as number of farmer shortage of vegetable is also significantly decreased. Moreover, there are numbers of farmers can produce surplus of vegetable for sale as well.

There are 28 VBA (village-based animators) have been trained on fish raising in plastic hole. Since those VBAs have adopted this innovation, other villagers also have tried this innovation by learning from VBAs. As a result, there are 53 farmer households have implemented fish raising in plastic hole. This innovation has been introduced in second year of the project. Each household has raised on average about 400 fingerlings. From the first raising season, the harvest of fish is just for home consumption, they did not generate cash incomes yet.

Table 18: Level of rice and vegetable shortage for home consumption

	Mean	Minimum	Maximum	% of THI
Total Nb of month lack of rice consumption in one year before the project	5.3	1.0	12.0	41

Total Nb of month lack of rice consumption in this year	5.2	1.0	12.0	33
Total Nb of month lack vegetable one year before the project	4.3	1	12	87
Total Nb of month lack vegetable this year	3.6	1	12	63

3.4.2. Household health status

16 new water-wells have been provided by the project and 3 old ones have been rehabilitated. Among five villages, there is a new water-well installed in each village, except one village there are two water-wells. Wells have been installed according to the need assessment on water shortage and technical assessment on ground water availability and quality of water. Each water-well has managed by a water-well management committees in which consist of 5 members. The management committees are selected from the member of water-well users. It is important to note that during the training, roles and responsibilities of water user group members and committees are clearly defined. However in practices, group members and committee members mostly depend on the chief of committee.

Water-well users are defined as people who paid a contribution to water-well construction. It was found that most of the contribution for water-well construction is paid by land-owners, except one village all 10-members paid the equal amount of contribution for water-well construction. However, land-owner has been consulted by project and voluntarily signed on letter of agreement that accepted 'land and well' are the community property. It is important to note that one of the five villages studied, all households contribute 1000 riels for water-well construction.

Five members of the management committee are responsible for overall management of water-wells. In general, we have observed that owner of the land closer to the well take more responsible for keeping the saving money for maintenance. Concerning the saving activity, it was implemented just about three to four months in earlier stage only which varies from 200 riels to 1000 riels per month in each water-well user group.

Concerning to the use of water from the well, before water-wells were installed women and children have spent much time for collection of water as water points are located far from homes. As a result, it affected to the learning time of children and time for women-mothers in doing farm activities and care-taking of children. Since water-wells were installed, community people are not only can access safe water easily but also can increase vegetable production in year-round and improving hygiene for their children.

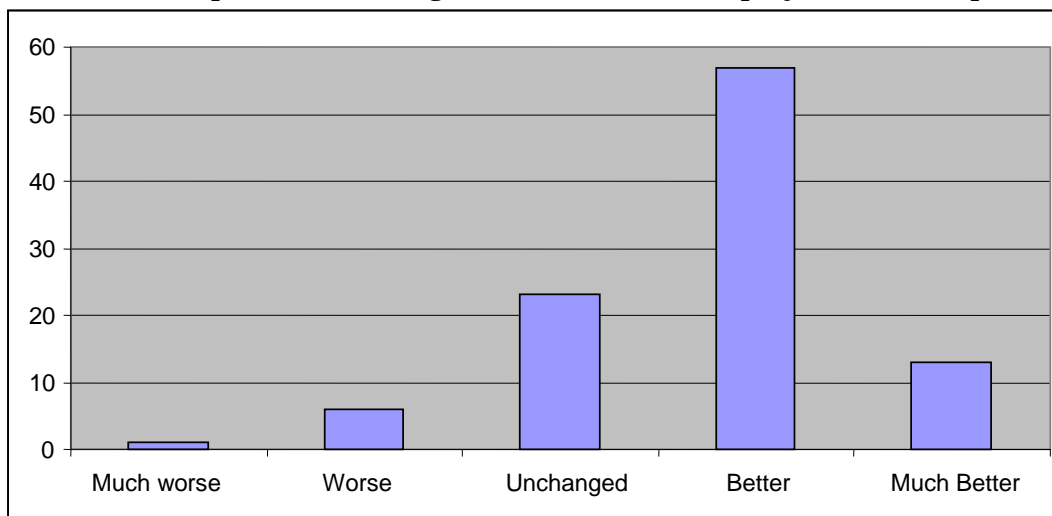
Due to the availability of water or easiness of access to water from the well, household health status has been improved as they shifted from using water from canals and lakes which are low hygiene quality to the safe-water from the well. However, it is found that only about 2 to 10 households regularly use of water from the well at the moment. It is due to the fact that since water-wells were installed there were also more rains, thus community people use water of their own-opened well for instead for their sources of water consumption. On the contrary, other community people also feel more secure with the access to safe-water in case there is drought as in the last few years.

Concerning the hygiene and sanitation activities, project has done four campaigns. Number of participants in each campaign varies from 35% (879 persons) to 69% (1844 participants) of the total population. 200 Kettles, 619 T-shirts (First time: 290 T-shirts and second time: 329 T-shirts) have been distributed. 1856 villagers also received soap and about 300 woman-mothers received training on nutrition and preparation of nutritional foods for children.

Among five village studied, there is a woman group in each village. Number of members of each group varies from 8 to 36 members. Among their members, 95% are married. About half of members have small children. 70% of them can read and write. They have selected 2-3 members as management committees. All groups have no internal regulation or statute as they think that they are under the umbrella of the farmer association, thus they depend on the regulation of the association.

In addition to the group discussion results, the survey respondents have reported that the health situation of their households has been slightly improved in comparing to the situation before project. Certain kind of diseases and number of times to sick related to some selected disease also decreased.

Chart 01: Perception on the change of health status before project and at the present



3.4.3. Knowledge of woman mother related health improvement

All woman groups have received training on sanitation, health practices and agricultural techniques related to vegetable growing and nutritional food preparation. As a result, most woman-mothers can describe the knowledge related to health care, sanitation, nutritional food preparation, prevention method (vaccination), de-worming and approaching to health centers or hospital in case serious diseases for their children. Woman-mothers can also describe the practices related to maternal care such as food consumption of the three groups related to vitamins, protein and energy and avoiding the consumption of coffee, tea, alcohol, tobacco and taking medicine without instruction of health staffs for pregnant women.

Even though they understand the health practices but in their real practices, there is still far from their knowledge such as 80% of woman-mother in group discussion did not drink filter-water or boiled-water regularly, 50% of woman-mothers still not yet improve hygiene in kitchen and only 15% of woman-mothers provide the nutritional porridge to their children. However, it is found that about 80-90% of woman-mother has practiced vegetable growing and 26% have boiled nutritional food for their children.

Concerning to the improvement of livelihood and health status of the family, women have reported that the health status of their family have been improved since they have more food to consume and diversity variety of vegetable. Moreover, they have practiced sanitation such as washing hands, drinking filter-water or boiled-water and knowledge to prepare food their family members. Women also reported that they are now more active in social participation such as give ideas in the community meeting, group work and sharing knowledge among their members.

Table 19: Summary impact on health and sanitation related indicators

No	Performance indicators	Before project (Project baseline)	After project (Result from Impact evaluation)
1	Parents correctly describe principles factors related to malnutrition	Initiative breastfeeding 32% Exclusive breastfeeding 56% Continuation of breastfeeding 47% Complementary feeding 32% Feeding frequency 1% Underweight prevalence 30.9%	Initiative breastfeeding 98.8% Continuation of breastfeeding 80.3% Complementary feeding 93.6% Feeding frequency 96.3%
2	Household served safe water and sanitation facilities	41% use safe drinking water	45% use boiled water regularly
3	Community people correctly identify main cause and treatment of diseases related to water and sanitation	25% washing hand with water and soaps or ash	65% washing hand with water and soaps
4	Population affected by diseases related to water sanitation	42% had diarrhea 68% had been ill with fever	29% had diarrhea 11% had been ill with fever
5	Woman participation in community development activities	30% of women participated in water and sanitation group formed by PRASAC	- First hygiene campaign with 1840 villagers, 1240 of them is women (67%). - Second hygiene campaign with 748 villagers, 556 of them is women (74%). - Third hygiene campaign with 1018 villagers, 732 of them is women (70%). - Technical training with 983 farmers, 672 of them is women.

IV. Conclusion and recommendations

From these initial findings, we would conclude that:

- Study team impressed that the design of the project is really meet the needs of the community people (food insecurity and water shortage). The combination of strengths of CEDAC and CESVI to work on these issues is really well suited. Our study team very impressed with the available documents on the project activities and results which allow us to go straight to measure the impact of the project. Those available documents of the projects are very helpful for us to set the methodology and process of the evaluation study.
- Project has achieved most of the expected outcomes, especially targeting to the poorest families in the community. However, continuation of this achievement is a subject matter to be discussed. As it is a two-year project, farmer associations are not well-ready to take over the continuation of the development activities.
- There is a need to continue to support to the management committees of the farmer associations as well as water user group committees in order they can provide the development services to their communities. However, we would expect that other villagers and other communities will be able to learn from the model farms in the communities as well.
- Facilitation of the supply of more filter-water pots to community is also needed as this stage most people are aware of the importance of drinking filter-water but they lack of capacity to afford to get it. It is not meant that farmers have no 40,000 riels to purchase it but the priority to use 40,000 riels in the poor-families will be provided to the productive investment such as purchasing piglet. Thus, they will leave the purchasing filter-water pot as less priority.

Last but not least, for the sustainability of the project achievement, we would suggest that project should find additional support to farmer trainers, farmer association committee, saving group committee, water user group committees...etc. so that they will be able to scale up the project achievement in the future.

List of consulted documents

1. Project Document: Food Security Initiative Fund Project Application Form. Project Period: 01/06/2005 to 30/05/2007
2. Draft report of project baseline, August 2005
3. Baseline report on health component of CLIP
4. A Six months progress report: 01st July to 31st December 2005
5. A Six months progress report: 01 January to 30th June 2006
6. A Six months progress report: 01st July to 31st December 2006

Annex 01: Program selection of water user group

1. Background:

After collection and analysis data, wells ranking were selected in 9 villages as shown in table below:

The villages in target will be provide new wells construction maximum 2 wells per village and minimum 1 wells per villages. The total 9 new well construction plan implementation for new wells construction will be start in March year 2006 to May year 2006 for the first year.

The objective of this activity to improve household to access and use of safe water. Finally, a careful community based selection of water User Group proper training and formalization of role and responsibilities is the main guarantee that user fees are collected and properly allocated for operation and maintenance of commune wells provided.

2. Methodology:

We will conduct meeting in each village with people for establishment and management community organization for O & M and User registration.

Guideline of Processes selection:

1. The criterion person who will be select by village's people and the facilitator should be facilitating help villagers to think about criteria.
2. The persons will be members are 5 persons per one water point by vote, should be 2 person are women must be select in that time.
3. 5 persons were selected to become a group management of that water point.

3. Agenda of villages meeting

Purpose of meeting:

- To sensitize villages people of Village Level Operation and Maintenance (VLOM).
- To facilitate establishment of community organization.
- To facilitate user registration.

Topics:

Time	Description	Methodology	Material	Facilitator
8:00	Registration participants		Form present	PDRD staffs and Villages chief
8:30	Village chief speak			Villages chief
8:40	Summary about villages wells ranking			Water Project Coordinator
9:00	To sensitize village people of VLOM	To prepare flipchart and presentation to village people	Paper A0 Marker	PDRD staffs
9:20	Explain Role and responsible of WPC	To prepare flipchart and presentation to village	Paper A0 Marker Village map	PDRD staffs

9:40	Explain criteria of person to become member of WPC	The facilitator guide the people to think about Candida who can do a good for WPC	Paper A0 Marker	PDRD staffs
10:20	To select and vote WPC	Explain about sign and tell people to cross that sign	List of sign Sign plaque	PDRD staffs
11: 00	To show the result of WPC	Total score on flipchart	Paper A0 Marker calculator	PDRD staffs
11:30	Next plan to do with WPC			Water Project Coordinator

6. The main Role and Responsibilities activities of Water Point Community

1. Site selection for new wells drilling.
2. Community mobilization.
3. Hand pumps operation and maintenance management.
4. Hygiene education activity.
5. User fees collection properly and allocation properly for operation and maintenance.
6. User registration of water point
7. Management and repair of hand pumps.
8. Daily registration that will use the water point and maintenance.
9. Management of water fund.

7. To sensitize village people of VLDM

1. describes proposed community organization and its management methods
2. To create sample role of VWC/WPC
3. Proposed members and members' work.
4. Introduced to village community and outsiders hand over stick of authority to villagers in the meeting.
5. Outsiders encourage villagers to take the lead and decide much of agenda.
6. decision-making
7. Outsider facilitates village people to arrange the guideline in agreement with users' preference.

Community Based Livelihood Improvement project

Preparation:

Ensure maximum number of people to attend
 To ensure that the selected WSUG is appropriately elected from community
 Make appointment before and good time for motivation (may be around night)

Annex 02: Lesson plan: WSUG election

- 1-Date : 03/02/06
- 2-Facilitator : Tuy Lalin, water Project Coordinator
- 3-Train to : PDRD staff
- 4-Duration : 2h20mn
- 5-Location : CESVI office
- 6-Objective : At the end of this training the person who attended to be able knows of methodology to organize the meeting in each water point.
- 7-Method : Brainstorming, discussion, exercise practices, explanation
- 8-Material needed : Flip chart, marker pen, tape, and document.
- 9-Step

STEP	ACTIVITIES	TIME	COMMENT
Objective presentation	Stick objective of the training on the wall Let 2-3 persons read them Facilitator help to explain	10mn	
WSUG establishment aim	Discuss with participants about our project. Talk about water supply for community in way to maintenance and water point in village. -Why CESVI and CEDAC provides well to community? And after CESVI and CEDAC stopped to support them what can they do? - How to maintain WP in the future?	10mn	
Criteria of candidate for all members WSUG	-How many point of criteria that we want to take? All participants can consider by themselves and write on small paper. -Facilitator collects idea to include on flipchart and discuss in big group and review its. - Demonstration good point of criteria	20mn	
Briefs of WSUG function	-Give 1or 2 participants read the document of function WSUG members.	5mn	
Candidate selection	- Mobilize people who volunteer - Ask participants to consider and point to some one. - The candidate stand up	15mn	
Election progress	- Give to keep 1candidate with 1color red and another black or other. - All participants look at to all candidates to remember the sign color of each candidate. - Make voting of one by one function	25mn	

	- The result check by facilitator and some from participants		
Result expectation	-Presentation all members supported by group user in the meeting. -Every body in WSUG brief of their function. -Facilitator helps them to improve if they don't understand. -Ask to participants 2 questions: Do they know well WSUG name? Know..., Some..... If yes, please describe names and their function. Mr.Soeurn is president Miss Thavy is treasurer	25mn	
Election practice	Role play: -5participants are candidate with color sign -1participant is facilitator conduct the meeting	20mn	
Lesson summary	Participants review the main points that they can remember of methodology of WUSG election Facilitator improves to help participants and demonstrate all document relate to activity of WSUG election step.	20mn	

Prepared by: Tuy Lalin,
Water Project Coordinator
Date: 03/02/06

Annex 03 : WSUGs' roles/responsibilities lesson plan

1. Date : 18/04/06
2. Facilitator : Water project coordinator, PDRD staffs
3. Train to : WSUG members
4. Duration : 4 h 40mn
5. Location : Village chief's house
6. Objective : At the end of this training session the member of WSUGs who attended is able to understand their roles/responsibilities and understand on their function:

WSUG president roles/responsibilities.

Vice president roles/responsibilities.

Treasurer roles/responsibilities.

Water sanitation service roles/responsibilities.

Hygiene adviser roles/responsibilities.

7. Method : Brainstorming, discussion, exercise practices and explanation
8. Materials : Flip chart, white board, marker pen, note book, scote, pen, and document.
9. Step

STEP	ACTIVITIES	TIME	COMMENTS
Introduction	Introduce each other and CLIP project introductory to WSUG	15mn	
Objective presentation	- Stick objective of the training on the wall - Let 2-3 persons read it - Facilitator help to explain	15mn	
Expectation, fear from participants	- Participants write with 2 deferent answers - Facilitator congratulate for the training	20mn	
Pre-test	- Let all participants fill on pre test with some questions as possible.	20mn	
Role of WSUG members	- Divide small group discussion - Collect all groups to compare their idea - Facilitator help them to correct	30mn	
Function of president	- Ask to 2-3 persons with question related to water use and sanitation. - Note their answers on the flip chart and analysis by all persons. - Stick the function of president on the wall - Let 2-3 persons read them	20mn	
Function of vice president	- Ask to 3-4 persons with question related to president in charging - Note their answers on the flip chart and analysis by all persons. - Stick the function of vice president on the wall - Let 2-3 persons read them	20mn	

Break		15mn	
Function of treasurer	<ul style="list-style-type: none"> - Ask to 3-4 persons with question related to problem of well in the future. - Note their answers on the flip chart and analysis by all persons - Stick the function of treasurer on the wall - Let 2-3 persons read them - Demonstration book keeping model - Divide small group to do exercise 	40mn	
Function of water/sanitation service	<ul style="list-style-type: none"> - Ask to 3-4 persons with question related to well have broken in the future. - Note their answers on the flip chart and analysis by all persons - Stick the function of water/sanitation service on the wall - Let 2-3 persons read it 	20mn	
Function of hygiene adviser	<ul style="list-style-type: none"> - Ask to 3-4 persons with question related to hygiene condition with problem and solve - Note their answers on the flip chart and analysis by all persons - Stick the function of hygiene adviser on the wall - Let 2-3 persons read it 	30mn	
Lesson summary	<ul style="list-style-type: none"> - Let participants review some main points that they can remember of roles and responsibilities of WUSG - Facilitator review and summary all main points and explain participants 	20mn	
Evaluation of training	<ul style="list-style-type: none"> Post test fill by all participants Facilitator read of training result 	30mn	

Date: 18/04/06

Prepared by: Tuy Lalin

Water Project coordinator