

***Appendix-B***  
***Rural Socio-Economy***

**THE STUDY  
ON  
BASIN-WIDE BASIC IRRIGATION AND DRAINAGE MASTER PLAN STUDY  
IN  
THE KINGDOM OF CAMBODIA**

**FINAL REPORT**

**APPENDIX-B RURAL SOCIO-ECONOMY**

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## CHAPTER B1 INTRODUCTION

### B1.1 General

Appendix-B of the Interim Report describes Rural-Socio Economy of the Four River Basins. In particular, during phase 1, agro socio-economic survey was carried out at 12 irrigation systems with the purpose of clarifying socio-economic conditions as well as agricultural and irrigation practice at those areas. The Appendix introduce those results and appurtenant studies related with Rural-Socio Economy under the Master Plan (M/P).

### B1.2 Study Area

#### B1.2.1 Administrative Information about the Study Area

The Four River Basins, categorized in the Tonle Samp Zone, is located in the western part of Cambodia along the Tonle Sap Lake through national road No. 5 from Phnom Phen. It administratively relates to six provinces, Battambang, Pursat, Kampong Chhnang, Kampong Speu, Kandal and Pailin, area of which is 22,868 km<sup>2</sup>.

According to the SEILA Commune Database 2005, administrative information consisting of the population, number of families, population density and average family size are shown in Table B1.2.1-1 and summarized as follows. In addition, some social indicators are derived and summarized afterward.

**Summary of Administrative Information of Four River Basin**

No.	Item	Battambang	Moung Russey	Pursat	Boribo	Total/Average of Four River Basin
	Area (km <sup>2</sup> )	6,050	3,700	5,900	7,200	22,850
1	Number of Province	3	2	1	4	6
2	Number of District	6	5	6	11	31
3	Number of Commune	45	30	38	111	231
4	Number of Families	63,399	44,226	46,989	146,281	305,218
5	Population	332,766	230,291	240,948	742,203	1,564,818
6	Population Density (person/km <sup>2</sup> )	61	62	35	112	68
7	Average Family Size (person/family)	4.5	5.2	5.1	5.1	5.1

Prepared by JICA Study Team based on the SEILA Database 2005

**Summary of Social Indicators of the Four River Basin**

No.	Item	Battambang	Moung Russey	Pursat	Boribo	Total/Average of Four River Basin
1	Children going to School	84 %	80 %	81 %	<b>89 %</b>	85 %
2	Illiteracy Ratio	15 %	<b>18 %</b>	17 %	13 %	15 %
3	Access to Pipe Water	21 %	23 %	27 %	<b>51 %</b>	37 %
4	Number of Livestock per Household	0.55 nos.	1.09 nos.	1.06 nos.	<b>1.12 nos.</b>	0.98 nos.
5	Farmers having Irrigated Field	3 %	5 %	8 %	<b>20 %</b>	12 %
6	Farmers using Fertilizer	30 %	53 %	34 %	<b>61 %</b>	48 %
7	Farmers using Pesticide	21 %	19 %	6 %	<b>20 %</b>	18 %
8	Minutes to Nearest Market	<b>30 min.</b>	38 min.	46 min.	37 min.	37 min.

Prepared by JICA Study Team based on the SEILA Database 2005

In the social data, most of the indicators are highest in the Boribo River Basin.

### B1.2.2 Agro Socio-Economic Survey Sites

Twelve irrigation systems are selected as sample sites so as to understand current situation of the Basins. Three irrigation systems are selected from each river basin as tabulated below:

**List of Irrigation Systems for Agro Socio-Economic Survey**

No.	Irrigation Scheme	River Basin	Province	District	Commune
1	Vat Balat Sytem	Battambang	Battambang	Sang Ker	Norea
2	Thmat Pong System		Battambang	Sang Ker	Wat Tameim and O Dambang I
3	Bot Sala Sytem		Battambang	Sang Ker	Wat Tameim and Bay Damram
4	Prek Chik System	Moung Russey	Battambang	Moung Russey	Prek Chik
5	Po Canal System		Battambang	Moung Russey	Chrey
6	Ream Kon System		Battambang	Moung Russey	Ta Laos and Chrey
7	Wat Loung System	Pursat	Pursat	Sampov Meas	Lolok Sar
8	Boeung Preah Ponley System		Pursat	Kravang	Preh Ponley
9	Wat Chre System		Pursat	Bakan	Boeung Khnar
10	Taram System	Boribo	Kampong Chhnang	Teuk Phos	Kbal Teuk
11	Khvet System		Kampong Chhnang	Teuk Phos	Kbal Teuk
12	Lum Hach System		Kampong Chhnang	Boribo	Anh Chanh Rong

Prepared by JICA Study Team

Main exercise under the survey consists of workshop and interview survey for selected farmers in the irrigation systems. Number of interviewee differs depending upon the scale of irrigation systems, however, 480 households are interviewed in total at above irrigation systems.

### B1.2.3 Implementing Schedule

The agro socio-economic survey was carried out according to the following implementation schedule.

**Implementing Schedule of Agro Socio-Economic Survey**

No.	Irrigation Scheme	River Basin	Date and/or Location		
			Workshop	Location	Interview Survey
1	Vat Balat Sytem	Battambang	Aug. 7 <sup>th</sup> , 2007	Primary School Vat Balat	Aug. 8 <sup>th</sup> , 2007
2	Thmat Pong System		Aug. 8 <sup>th</sup> , 2007	Primary School Slokram	Aug. 9 <sup>th</sup> , 2007
3	Bot Sala Sytem		Aug. 9 <sup>th</sup> , 2007	Primary School Anlong Lvea	Aug. 10 <sup>th</sup> , 2007
4	Prek Chik System	Moung Russey	Aug. 10 <sup>th</sup> , 2007	Primary School Prek Ta Ven	Aug. 11 <sup>th</sup> , 2007
5	Po Canal System		Aug. 11 <sup>th</sup> , 2007	Meeting Room of Commune Office Chrey	Aug. 12 <sup>th</sup> , 2007
6	Ream Kon System		Aug. 12 <sup>th</sup> , 2007	Primary School of Ta Laos	Aug. 13 <sup>th</sup> , 2007
7	Wat Loung System	Pursat	Aug. 2 <sup>nd</sup> , 2007	Primary School Wat Loung	Aug. 5 <sup>th</sup> , 2007
8	Boeung Preah Ponley System		Aug. 3 <sup>rd</sup> , 2007	Primary School	Aug. 6 <sup>th</sup> , 2007

No.	Irrigation Scheme	River Basin	Date and/or Location		
			Workshop	Location	Interview Survey
				Baot Rudul	
9	Wat Chre System		Aug. 4 <sup>th</sup> , 2007	Baley School Wat Chrea	Aug. 7 <sup>th</sup> , 2007
10	Taram System	Boribo	July 31 <sup>st</sup> , 2007	Primary School Srae Kach	Aug. 4 <sup>th</sup> , 2007
11	Khvet System		July 30 <sup>th</sup> , 2007	Primary School Thnol Keng	Aug. 3 <sup>rd</sup> , 2007
12	Lum Hach System		July 25 <sup>th</sup> , 2007	Primary School Dos Leung	July 26 <sup>th</sup> to 27 <sup>th</sup> , 2007

## CHAPTER B2 WORKSHOP

### B2.1 Methodology

Workshop was organized at each irrigation system. Through the session, following information was collected in order to assess the needs and collect the opinions of the communities with regard to irrigation.

- The needs, constraints and perception of participants on current irrigated agriculture
- Identification of problems and their ranking experienced by the target groups so as to help increasing their income through irrigation
- Identification of solutions to the identified problems by considering solutions and necessary actions by the target groups themselves and the Government

General program of the workshop is shown as follows:

**Workshop Time Schedule**

Time	Activity	Objective	By
08:00–08:30	Registration	Registration and Distribution of Workshop Materials	
08:30–08:40	Plenary Session	Opening Remarks	PDOWRAM and the Study Team
08:40 – 09:30	<b>Generals</b> Getting to Know & Explanation of Overview of the Study - Study Purpose - Interview Survey - Workshop Procedure	<ul style="list-style-type: none"> <li>• Ice Breaking, Self Introduction &amp; Workshop Objectives and Methodology to be fully understood</li> <li>• To understand and reconfirm the Study purpose and procedure among the participants</li> </ul>	JICA Study Team
09:30 – 10:30	<b>Poverty Ranking</b> Community Grouping and Interviewee Listing	<ul style="list-style-type: none"> <li>• Categorization of community members</li> <li>• Preparation of Interviewee list</li> </ul>	JICA Study Team
10:30 – 11:15	<b>Problem Census-1</b> Identifying problems - Grouping - Listing up of problems	<ul style="list-style-type: none"> <li>• Listing up of problems related with irrigation, agriculture, environment etc. through group work (<b>GROUP WORK</b>)</li> </ul>	Facilitated by JICA Study Team
11:15 – 11:40	<b>Problem Census-2</b> Recording and reporting group discussions	<ul style="list-style-type: none"> <li>• Reporting group discussion from each representative to share ideas among participants</li> </ul>	Participants
11:40 – 12:10	<b>Problem Census-3</b> Identifying common/consolidated problems	<ul style="list-style-type: none"> <li>• Comparing all the lists to consolidate them into smaller list of problems (<b>ALL PARTICIPANTS</b>)</li> </ul>	Facilitated by JICA Study Team
12:10 – 13:00	Break & Lunch		
13:00 – 13:40	<b>Problem Census-4</b> Placing priorities on problems and preparing countermeasures	<ul style="list-style-type: none"> <li>• Prioritizing problems listed by scoring and preparing countermeasures to each problem (<b>ALL PARTICIPANTS &amp; GROUP WORK</b>)</li> </ul>	Facilitated by JICA Study Team
13:40 – 14:00	<b>Problem Census-5</b> Presentation from each group	<ul style="list-style-type: none"> <li>• Presenting countermeasures discussed in the group</li> </ul>	Participants

Time	Activity	Objective	By
14:00 – 14:20	Question & Answer	<ul style="list-style-type: none"> <li>The Study Team &amp; PDOWRAM raise questions/problems &amp; suggestion from their viewpoint</li> </ul>	Facilitated by JICA Study Team
14:20 – 14:30	Evaluation	<ul style="list-style-type: none"> <li>Filling-up enquete</li> </ul>	
14:30 – 14:45	Plenary	Wrap-up of Workshop	
		Closing remarks	PDOWRAM and the Study Team

Each session, duration of which was one day, commenced with the explanation of the objectives and the methodology of the workshop as farmers' participatory approach to the attendants. The program are, then, problem and constraints identification (so called as the **Problem Census**), and follow-up action preparation, which are in a manner of group discussion and focus group discussion.

Poverty assessment (called as the **Poverty Ranking**) is also carried out at each system. In this session, poverty level is classified into four: (i) Destitute (poorest), (ii) Poor, (iii) Fair, and (iv) Rich. Poverty is multi-dimensional, complex, and each local community embraces different concepts of risks. Classification is, therefore, made from the view point of (i) income level, (ii) asset owned including land, (iii) education level, (iv) satisfaction level of basic human needs, and (v) financial transaction with financial institutions, and levels of each item are determined by each workshop attendants.

In addition, during the workshop, important environmental issue under each irrigation systems are confirmed so as to provide basic data for Initial Environmental Examination (IEE), result of which are explained in Appendix-F, Environment.

## **B2.2 Attendance**

Number of participants for the workshop ranges from 18 to 34 selected primarily by the Commune Chief and the farmers. Participants are in general the representative population from each irrigation system listed below:

- Representative from MOWRAM
- Representative from PDOWRAM
- Commune Chief
- Vice-Commune Chief
- Member of Commune Council
- Village Chief, and
- Representative farmers.

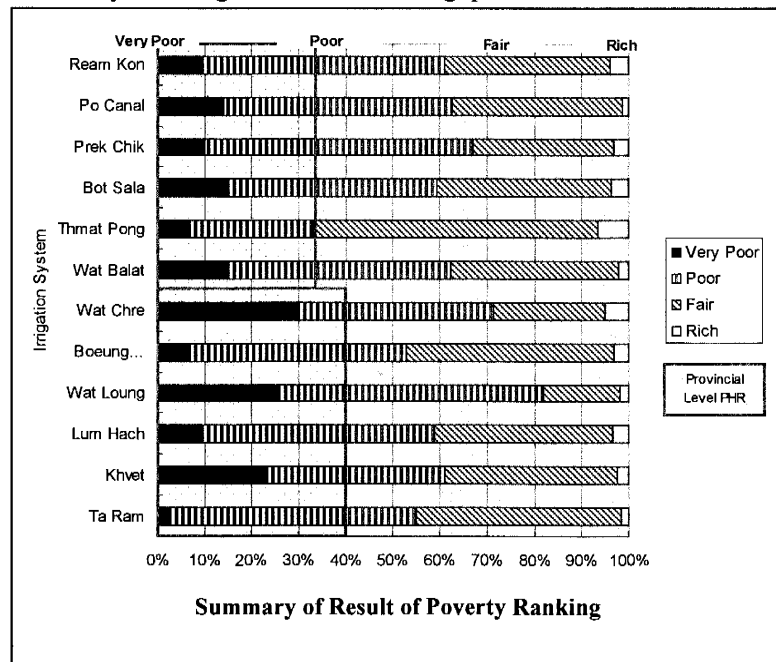


## B2.3 The Result of Workshop

### B2.3.1 Poverty Ranking

The latest Government poverty line is represented by the Ministry of Planning (2006)<sup>1</sup> showing that the total poverty line Riel 2,124 (US\$ 0.53) daily per capita household consumption consists of two parts: the food poverty line Riel 1,684 (US\$ 0.42) and Non-food poverty line Riel 440 (US\$ 0.10). On this basis, poverty head count index is estimated covering entire country. In this survey, although there are some gaps with above-authorized figures, other variables are extensively utilized which is determined by the participants, namely possession of assets, education level, basic human needs satisfaction, and financial transaction experience. So the criteria are more comprehensive for poverty assessment at sample irrigation systems.

The result of poverty ranking at each irrigation system is shown in Table B2.3-1 to B2.3-12 and its



summary is shown on the right figure. Major findings from this exercises are itemized as follows:

- Poverty head count ratio based on abovementioned standard, Battambang Province shows 33.69 % while Kampong Chhnang/Pursat Provinces reach 39.57 %, latter of which is higher than country's average 35.13 %. The result shows that the participants with higher percentage than Provincial figure in most of the irrigation systems categorized themselves as "very poor" or "poor" according to their criteria. This result implies that they have strong desire to improve living conditions of the community.
- Land possession size, one of the important resources for irrigated agriculture, extensively ranges among systems. In general, farmers in the Moung Russey River Basin has largest size of the land while those in the Boribo River Basin are smallest which would be determined primarily by the water resources availability and topographic conditions different in each locality.
- Except for rich strata in poverty ranking, 1.5 % to more or less 5 % of the members, in each community, farmers do not have any accessibility to formal banking institution while informal connections within the villages are of importance to get capital for

<sup>1</sup> Ministry of Planning (2006), A Poverty Profile of Cambodia 2004

irrigated agriculture.

### **B2.3.2 Problem Census**

In each workshop, the participants were split into small groups so as to list up problems currently facing in the irrigation systems. The problems raised by the participants are listed as follows:

- Lack of irrigation water
- Crops destroyed by insects
- Lack of techniques for agriculture
- Lack of animals for farming
- Low quality of rice
- Poor physical accessibility to the market for agricultural products
- Lack of quality seed
- Insufficient participation in irrigation systems O&M and the water management by farmers
- Lack of capital for farming
- Low price of rice
- High cost of fuel, resulting in high production cost
- Insufficient communication with relevant institutions
- Insufficient number of pumps for irrigation

Those ranged from irrigation, agriculture, marketing, credit and so forth. Then, problems were categorized and ranked by the participants for the preparation of measure to be taken for problem solving. The results at all the irrigation systems are shown in Table B2.3-13 to B2.3-24. Measure findings are summarized as follows:

- Participants at all the irrigation systems raised lack of water as most serious constraints in the community. The situation is caused by the deterioration of facilities in the irrigation system, therefore, highly prioritized program perceived by participants are rehabilitation of irrigation facilities.
- Insufficient techniques in faring were also emphasized in the discussion. This would be due to insufficient extension services by relevant organization such as PDOWRAM, DOA etc. Main causes for this matter are budgetary constraints in both farmers and the government, and poor physical accessibility to communities which restrain provision of regular extension services.

## CHAPTER B3 HOUSEHOLD SURVEY

### B3.1 Methodology

#### B3.1.1 Interviewee Selection

As already explained previously, total number of interviewee is 480 from 12 sample irrigation systems, ranging from 30 to 60 from each depending upon the scale of the system, as shown below:

No.	Irrigation Scheme	River Basin	Province	Number of Interviewee	Rich	Fair	Poor	Very Poor
1.	Vat Balat Sytem	Battambang	Battambang	40	3	11	19	7
2.	Thmat Pong System		Battambang	40	10	11	11	8
3.	Bot Sala Sytem		Battambang	30	8	8	8	6
4.	Prek Chik System	Moung Russey	Battambang	40	9	11	12	8
5.	Po Canal System		Battambang	40	10	10	10	10
6.	Ream Kon System		Battambang	40	10	10	9	11
7.	Wat Loung System	Pursat	Pursat	40	2	13	15	10
8.	Boeung Preah Ponley System		Pursat	50	10	15	16	9
9.	Wat Chre System		Pursat	40	6	14	10	10
10.	Taram System	Boribo	Kampong Chhnang	30	2	11	12	5
11.	Khvet System		Kampong Chhnang	30	5	8	11	6
12.	Lum Hach System		Kampong Chhnang	60	3	25	22	10
	Total			<b>480</b>	<b>78</b>	<b>147</b>	<b>155</b>	<b>100</b>

In order to obtain reliable results showing the characteristics of socio-economic conditions in each irrigation system, the interviewee is selected from all the strata, rich to very poor in a balanced manner based on the poverty ranking in the workshop.

#### B3.1.2 Questionnaire

The Questionnaire includes following contents prepared in consideration of the purpose of the interview:

##### Part 1 Socio-Economy

- Section I      General information about socio-economy
- Section II     Living condition
- Section III    Income and expenditure
- Section IV    Savings and loan

## Part 2 Agriculture

- Section I Livestock and fruits trees
- Section II Land holding
- Section III Cropped area & production (crop year 2005/2006)
- Section IV Farming practices (practices adopted by interviewee in the last year)
- Section V Production (crop year 2005/2006)
- Section VI Post-harvest, processing and marketing
- Section VII Agricultural support services
- Section VIII Farming constraints and improvement
- Section IX Livestock Constraints
- Section X Expectation
- Section XI Participation in agricultural support/project activities in the past

## Part 3 Irrigation/Drainage & Water Management

- Section I Participatory awareness level for the project
- Section II Negative effect
- Section III Irrigation, water management & farmers water users community (FWUC)
- Section IV Flood damage

### **B3.2 The Result**

The result of the household survey is presented in Table B3.2-1. The Team reviewed all these data obtained through this survey and utilized fully for the formulation of the Master Plan.

## ***Tables***

Table B1.2.1-1 Administrative Information of the Four River Basins (1/3)

River Basin	Province	District	Commune	No. of Families	Population	Population Density (person/km <sup>2</sup> )	Average Family Size	
Battambang	Battambang	Banan	Kantueu Muoy	1,041	5,217	60	5.0	
			Kantueu Pir	1,239	6,097	194	4.9	
			Bay Damram	1,440	7,491	166	5.2	
			Chheu Teal	494	2,645	413	5.4	
			Chaeng Mean Chey	1,441	7,672	70	5.3	
		Aek Phnum	Snoeng	335	1,685	61	5.0	
			Tuol Ta Aek	1,136	5,983	4,611	5.3	
			Preaek Preah Sdach	2,494	13,195	4,369	5.3	
			Rotanak	2,643	14,432	2,122	5.5	
			Chamkar Samraong	119	564	1,638	4.7	
			Sja Kaet	40	224	1,003	5.5	
			Kdol Doun Teav	74	380	917	5.1	
			Voat Kor	263	1,446	620	5.5	
			Svay Pao	3,150	18,201	8,200	5.8	
			Preaek Norint	640	3,026	139	4.7	
			Samraong Knong	2,295	12,046	579	5.2	
			Preaek Khpob	3,577	17,035	641	4.8	
			Preaek Luong	3,577	17,035	266	4.8	
			Prey Chas	403	2,109	13	5.2	
			Kaoh Chiveang	1,913	10,035	22	5.2	
			Moung Ruessei	Chrey	954	4,904	23	5.1
				Ta Loas	999	5,035	64	5.0
				Kakaoh	318	1,521	138	4.8
				Prey Touch	1,489	8,134	85	5.5
				Thipakdei	1,801	8,831	67	4.9
		Koas Krala		774	3,605	131	4.7	
		Hab		326	1,537	69	4.7	
		Preah Phos		68	321	16	4.7	
		Doun Ba		641	3,385	28	5.3	
		Chhnal Moan		383	1,836	5	4.8	
		Rotonak Mondol		Sdau	416	2,087	77	5.0
				Andaek Haeb	1,021	5,051	38	4.9
			Phlov Meas	952	5,191	18	5.5	
			Traeng	1,564	8,055	28	5.1	
		Sangkae	Anlong Vil	3,355	17,699	440	5.3	
			Norea	999	5,330	735	5.3	
			Ta Pon	2,754	12,984	68	4.7	
			Roka	1,657	8,140	53	4.9	
			Kampong Preah	3,459	19,973	74	5.8	
			Kampong Pring	1,510	8,598	27	5.7	
			Reang Ksei	1,510	8,598	90	5.7	
			Ou Dambang Muoy	2,302	13,476	526	5.9	
			Ou Dambang Pir	2,372	12,119	425	5.1	
			Voat Ta Muem	2,697	15,205	374	5.6	
		Samlout	963	4,635	4	4.8		
		Sub-total	6	45	63,599	332,766	63	5.2
		Pursat	Veal Veang	Anlong Reab	58	307	3	5.3
				Thma Da	4	15	1	4.2
		Sub-total	1	2	62	322	4	5.2
		Pailin	Pailin	Pailin	1,732	8,081	87	4.7
				Ou Tavau	1,417	5,873	32	4.1
				Tuol Lvea	614	2,702	49	4.4
				Ba Yakha	197	973	22	4.9
Sub-total	1	4	3,959	17,629	47	4.5		
	Sala Krau	Stueng Kach	103	459	100	4.5		
Sub-total	1	1	103	459	100	4.5		
Total		9	52	67,722	351,176	61	4.5	
Boribo	Kampong Chhnang	Baribour	Anhchanh Rung	1,067	4,714	69	4.4	
			Chhnok Tru	796	4,274	143	5.4	
			Chak	643	2,669	162	4.2	
			Khon Rang	1,473	6,776	215	4.6	
			Kampong Preah Kokir	403	1,875	31	4.7	
			Melum	854	3,697	70	4.3	
			Phsar	1,123	5,093	141	4.5	
			Pech Changvar	725	3,380	61	4.7	
			Popel	1,006	4,699	168	4.7	
			Ponley	1,580	7,186	1,151	4.5	
			Trapeang Chan	1,073	4,826	124	4.5	
			Kampong Tralach	Ampil Tuek	2,379	12,370	113	5.2
				Chhuk Sa	1,774	8,311	124	4.7
				Chres	1,871	8,996	240	4.8
				Kampong Tralach	1,116	5,869	155	5.3
				Longveaek	1,429	6,943	141	4.9
		Ou Ruessei		1,713	7,945	398	4.6	
		Peani		1,538	7,426	344	4.8	
		Saeb		1,323	6,582	191	5.0	
		Ta Ches		2,217	12,272	230	5.5	
		Thma Edth		987	4,868	142	4.9	
		Rolea B'ier	Andoung Snay	1,085	5,440	143	5.0	
			Banteay Preal	911	3,873	76	4.3	
			Cheung Kreav	1,349	6,349	115	4.7	
			Chrey Bak	2,098	9,887	220	4.7	
			Kouk Banteay	1,097	5,621	86	5.1	
			Krang Leav	1,209	5,625	93	4.7	
			Pongro	1,545	6,969	251	4.5	
		Prasneb	1,098	4,931	39	4.5		

Table B1.2.1-1 Administrative Information of the Four River Basins (2/3)

River Basin	Province	District	Commune	No. of Families	Population	Population Density (person/km2)	Average Family Size	
			Prey Mul	848	3,908	87	4.6	
			Rolea B'ier	1,742	7,915	243	4.5	
			Srae Thmei	2,116	9,949	340	4.7	
			Svay Chrum	2,837	13,067	153	4.6	
			Tuek Hout	1,399	7,161	151	5.1	
			Akphivoadth	1,737	8,379	126	4.8	
			Chieb	1,197	6,007	17	5.0	
			Chaong Maong	1,238	6,213	96	5.0	
			Kbal Tuek	921	4,163	17	4.5	
			Khlong Popok	1,145	5,319	49	4.6	
			Krang Skear	2,368	11,411	19	4.8	
			Tang Krasang	1,826	8,608	66	4.7	
			Tuol Khpos	832	3,947	29	4.7	
			Sameakki Mean Chey	Chhean Laeung	784	4,691	86	6.0
				Khnar Chhmar	1,375	6,394	232	4.7
				Krang Lvea	1,689	8,628	50	5.1
				Peam	1,583	7,673	76	4.8
				Sedthei	1,334	6,791	135	5.1
				Svay	1,969	9,630	246	4.9
				Svay Chuk	1,805	8,939	77	5.0
				Tbaeng Khpos	1,743	8,929	127	5.1
Thlok Vien	1,091	5,642		142	5.2			
Sub-total	4	51		71,061	342,830	87	4.8	
Kampong Speu	Aoral	Trapeang Chour	283	1,282	53	4.5		
		Aoral	288	1,212	13	4.2		
	Odongk	Chant Saen	1,153	6,219	189	5.4		
		Cheung Roas	1,180	6,947	196	5.9		
		Khsem Khsan	1,664	9,037	220	5.4		
		Krang Chek	2,126	11,781	336	5.5		
		Mean Chey	1,142	6,178	195	5.4		
		Preah Srae	1,492	8,074	234	5.4		
		Prey Krasang	792	4,266	260	5.4		
		Trach Tong	1,302	7,059	154	5.4		
		Veal Pung	2,385	12,627	238	5.3		
		Veang Chas	1,328	6,935	975	5.2		
		Yuth Sameakki	1,316	6,987	192	5.3		
		Damnak Reang	1,134	6,094	182	5.4		
		Peang Lvea	1,285	7,338	221	5.7		
		Phnum Touch	1,800	9,942	224	5.5		
		Thpong	Amleang	1,574	7,614	36	4.8	
			Monourom	950	4,949	219	5.2	
			Prambei Mom	1,337	6,983	62	5.2	
	Rung Roeang		585	2,891	72	4.9		
	Veal Pon		1,587	8,120	259	5.1		
Yea Angk	162	829	54	5.1				
Sub-total	3	22	26,865	143,365	139	5.3		
Kandal	Angk Snuol	Baek Chan	1,890	10,065	744	5.3		
		Boeng Thum	1,301	6,382	389	4.9		
		Chhak Chheu Neang	635	3,272	431	5.2		
		Damnak Ampil	872	4,830	589	5.5		
		Kamboul	1,154	6,254	341	5.4		
		Kantaok	1,760	10,850	657	6.2		
		Krang Mkak	806	4,614	355	5.7		
		Lumhach	1,368	7,335	433	5.4		
		Mkak	1,800	10,343	351	5.7		
		Ovlaok	631	3,507	226	5.6		
		Peuk	1,218	6,694	467	5.5		
		Ponsang	1,753	8,735	230	5.0		
		Prey Puok	1,311	7,056	433	5.4		
		Samraong Leu	1,437	8,341	268	5.8		
		Snao	812	4,317	300	5.3		
		Tuol Prech	1,179	6,692	202	5.7		
		Ponhea Lueu	Chhveang	1,447	8,034	285	5.6	
			Chrey Loas	1,447	7,436	196	5.1	
			Kampong Luong	1,887	10,832	580	5.7	
			Kampong Os	1,332	7,300	106	5.5	
	Kaoh Chen		1,813	9,514	270	5.2		
	Phnum Bat		1,939	9,485	286	4.9		
	Ponhea Lueu		724	3,711	358	5.1		
	Ponhea Pon		1,214	5,608	297	4.6		
	Preaek Pnov		2,358	12,418	1,902	5.3		
	Preaek Ta Tean		1,432	7,361	725	5.1		
	Phsar Daek	1,356	6,898	446	5.1			
	Samraong	1,143	6,034	320	5.3			
	Tumnob Thum	1,252	6,604	250	5.3			
	Vihear Luong	1,311	6,458	818	4.9			
Sub-total	2	30	40,582	216,980	339	5.3		
Pursat	Krakor	Anlong Tnaot	1,692	8,720	90	5.2		
		Ansa Chambak	1,260	6,392	30	5.1		
		Chheu Tom	2,061	9,647	58	4.7		
		Kbal Trach	1,471	7,979	46	5.4		
		Ou Sandan	212	1,103	57	5.2		
		Sna Ansa	428	2,130	53	5.0		
		Svay Sa	209	1,072	31	5.1		
	Phnum Kravanh	Prongil	439	2,185	8	5.0		
Sub-total	2	8	7,773	39,229	39	5.0		

Table B1.2.1-1 Administrative Information of the Four River Basins (3/3)

River Basin	Province	District	Commune	No. of Families	Population	Population Density (person/km <sup>2</sup> )	Average Family Size		
	Total	11	111	146,281	742,403	112	5.1		
Moung Russei	Battambang	Moung Ruessei	Moung Ruessei	2,904	15,481	304	5.3		
			Kear	3,057	16,649	173	5.4		
			Prey Svay	2,711	13,358	93	4.9		
			Ruessei Krang	2,662	14,490	89	5.4		
			Chrey	1,271	6,529	23	5.1		
			Ta Loas	739	3,724	64	5.0		
			Kakaoh	2,154	10,314	138	4.8		
			Prey Touch	314	1,716	85	5.5		
			Robas Mongkol	2,450	11,930	93	4.9		
			Preaek Chik	2,202	11,236	81	5.1		
			Prey Tralach	4,107	20,282	74	4.9		
			Hab	388	1,829	69	4.7		
			Preah Phos	599	2,830	16	4.7		
			Chhnal Moan	220	1,056	5	4.8		
			Samlout	48	231	4	4.8		
			Sub-total	2	15	25,827	131,656	69	5.1
			Pursat	Bakan	Boeng Bat Kandaol	257	1,324	53	5.2
					Boeng Khnar	2,387	12,450	220	5.2
					Khnar Totueng	1,569	8,002	149	5.1
	Me Tuek	2,350			13,445	55	5.7		
	Ou Ta Paong	2,928			15,808	54	5.4		
	Rumlech	1,562			8,404	159	5.4		
	Svay Doun Kaev	1,126			6,262	210	5.6		
Ta Lou	2,806	14,234			51	5.1			
Trapeang Chong	2,209	12,200			235	5.5			
Phnum Kravanh	Bak Chenhchien	51			284	172	5.5		
	Phteah Rung	916			5,054	100	5.5		
	Samraong	56			285	18	5.1		
Veal Veang	Pramaoy	136			653	1	4.8		
	Anlong Reab	26			136	3	5.3		
	Ou Saom	20	93	4	4.7				
Sub-total	3	15	18,400	98,635	56	5.4			
Total	5	30	44,226	230,291	62	5.2			
Pursat	Pursat	Bakan	Boeng Bat Kandaol	1,731	8,918	53	5.2		
			Me Tuek	181	1,035	55	5.7		
			Snam Preah	3,203	16,399	72	5.1		
			Ta Lou	289	1,464	51	5.1		
			Trapeang Chong	1,323	7,306	235	5.5		
		Kandieng	Anlong Vil	1,000	5,122	161	5.1		
			Banteay Dei	1,096	5,571	382	5.1		
			Kandieng	1,229	6,207	220	5.1		
			Kanhchor	1,795	8,750	102	4.9		
			Srae Sdok	1,964	11,103	49	5.7		
			Svay Luong	1,157	6,222	246	5.4		
			Sya	1,257	6,009	48	4.8		
			Veal	1,072	5,377	1,014	5.0		
			Krakor	Boeng Kantuot	1,141	5,639	120	4.9	
		Chheu Tom		308	1,440	58	4.7		
		Kampong Pou		1,227	5,935	80	4.8		
		Ou Sandan		726	3,777	57	5.2		
		Sna Ansa		500	2,489	53	5.0		
		Svay Sa		966	4,960	31	5.1		
		Tnaot Chum		2,046	11,528	68	5.6		
		Phnum Kravanh		Bak Chenhchien	1,212	6,712	172	5.5	
			Leach	1,639	8,102	391	4.9		
			Phteah Rung	1,901	10,488	100	5.5		
			Prongil	1,330	6,613	8	5.0		
			Rokat	765	3,893	5	5.1		
			Santree	888	4,582	7	5.2		
			Samraong	1,926	9,758	18	5.1		
			Sampov Meas	Chamraeun Phal	1,146	6,143	104	5.4	
				Kaoh Chum	1,353	6,653	237	4.9	
		Lolok Sa		1,786	9,370	219	5.2		
		Phteah Prey		3,297	16,405	1,272	5.0		
		Prey Nhi		965	5,125	643	5.3		
		Roleab		2,574	12,103	59	4.7		
		Svay at		912	4,502	412	4.9		
		Veal Veang	Ou Saom	50	198	1	4.0		
			Pramaoy	40	192	1	4.8		
			Anlong Reab	274	1,453	3	5.3		
			Ou Saom	722	3,406	4	4.7		
		Total	6	38	46,989	240,948	35	5.1	
		Grand Total	31	231	305,218	1,564,818	68	5.1	

Source: SEILA Commune Database 2005



**Table B2.3.1 Result of Poverty Ranking at Vat Balat Irrigation System (Battambang River Basin)**

Classification	Number of Family	Percentage	1. Income		2. Asset				3. Education Level	4. Basic Human needs Satisfaction	5. Financial Transaction Experience
			Average Income per Day per Person (Riels)	Source of Income (main economic activity)	Land (ha)	Bicycles, motorcycles, cars, truck, tractors, etc.	TV, music, player, video, radio, etc	Livestock			
Destitute	153F	15%	0-3000	Labor	0-0.016	old bicycle	small radio	0-6 chicken	primary school	enough for 3 months	Banks, farmer's group, money lenders, middlemen, pawnshop, etc.,
Poor	473F	47%	3000-5000	Labor out of village	0.016-0.5	bicycle	radio, TV	4-10 chicken 1-2 cow	secondary school	enough for 6 months	Can't lend money and debt from neighbor, paid them back through Labor
Fair	357F	36%	5000-10000	Land owner farmer	0.5-1	bicycle, motorbike, engine cart	radio, color TV, VCD, hand phone	0-6 chicken 4-7 cow 10-20 goats 2 pigs	high school drop out	enough	Have money to lend to neighbor and can lend money from the bank
Rich	22F	2%	>10000	Land Owner, Trader	1-3	bicycle, motorbike, engine cart, car	radio, color TV, VCD, hand phone	5-10 cow 20-30 pigs	high school	more than enough	have money to lend to neighbor, group saving, can lend money from the bank
Total	1,005F	100%									

**Table B2.3.2 Result of Poverty Ranking at Thmat Pong Irrigation System (Battambang River Basin)**

Classification	Number of Family	Percentage	1. Income		2. Asset				3. Education Level	4. Basic Human needs Satisfaction	5. Financial Transaction Experience
			Average Income per Day per Person (Riels)	Source of Income (main economic activity)	Land (ha)	Bicycles, motorcycles, cars, truck, tractors, etc.	TV, music, player, video, radio, etc	Livestock			
Destitute	117F	7%	0-2000	Labor	0-0.5	old bicycle	Nothing	2-3 chicken 1-3 cow (exchange labor)	primary school	enough for 4 months	Can't lend money and debt from neighbor, paid them back through Labor
Poor	453F	26%	2000-3000	Labor out of village	0.5-0.7	bicycle, cart	radio, TV	3-5 chicken 1-2 cow 1-3 cow (exchange labor)	secondary school	enough for 6 months	lend money from neighbor
Fair	1038F	60%	3000-5000	Land owner farmer, workers	0.7-2	bicycle, motorbike	radio, TV, VCD, hand phone	5-10 chicken 1-2 pigs 2-4 cow	high school drop-out	enough	Have money to lend to neighbor and can lend money from the bank
Rich	116F	7%	5000-10000	Land Owner, Trader, contractors	2-7	bicycle, motorbike, car, engine cart	radio, color TV, VCD, hand phone, water pump, rice miller, engine thresher	6-15 chicken 1-3 pigs 2-5 cow	high school	more than enough	have money to lend to neighbor, can group saving, can lend money from the bank
Total	1,724F	100%									

**Table B2.3.3 Result of Poverty Ranking at Bot Sala Irrigation System (Battambang River Basin)**

Classification	Number of Family	Percentage	1. Income		2. Asset				3. Education Level	4. Basic Human needs Satisfaction	5. Financial Transaction Experience
			Average Income per Day per Person (Riels)	Source of Income (main economic activity)	Land (ha)	Bicycles, motorcycles, cars, truck, tractors, etc.	TV, music, player, video, radio, etc	Livestock			
Destitute	254F	15%	0-800	Labor	0-0.03	old bicycle	nothing	1 cow (exchange labor)	primary school	enough for 3 months	Can't lend money and debt from neighbor, paid them back through Labor
Poor	770F	44%	800-2300	Labor out of village	0.03-1	Bicycle, cart, old motorbike	radio	1-5 chicken 1-2 pigs 2-4 cow (exchange labor)	secondary school	enough for 6 months	lend money from neighbor
Fair	635F	37%	2300-5000	Land owner farmer, workers	1-2	Bicycle, cart, motorbike	radio, TV, VCD, hand phone	5-10 chicken 1-4 pigs 3-5 cow 0-20 goats	high school	enough	Have money to lend to neighbor and can lend money from the bank
Rich	65F	4%	5000-10000	Land Owner, Trader, buy and sell land	2-5	Bicycle, motorbike, cart, car, engine cart, truck	radio, TV, VCD, hand phone, rice miller, engine thresher	0-6 chicken 10-20 cow 0-2 pigs 1-25 crocodiles 0-30 goats	Institute	more than enough	have money to lend to neighbor, group saving, can lend money from the bank
Total	1,724F	100%									

**Table B2.3.4 Result of Poverty Ranking at Prek Chik Irrigation System (Moung Ryssey River Basin)**

Classification	Number of Family	Percentage	1. Income		2. Asset				3. Education Level	4. Basic Human needs Satisfaction	5. Financial Transaction Experience
			Average Income per Day per Person (Riels)	Source of Income (main economic activity)	Land (ha)	Bicycles, motorcycles, cars, truck, tractors, etc.	TV, music, player, video, radio, etc	Livestock			
Destitute	115F	10%	0-1000	Labor	0-0.03	old bicycle	small radio	0-3 chicken 1-2 cow (exchange labor)	primary school drop-out	enough for 3 months	Can't lend money and debt from neighbor, paid them back through Labor
Poor	656F	57%	1000-2500	Labor out of village	0.03-1	bicycle, cart	radio, TV	0-5 chicken 1-2 cow (exchange labor) 1 pig	secondary school	enough for 6 months	lend money from neighbor
Fair	341F	30%	2500-5000	Land owner farmer, workers	1-5	bicycle, cart, motorbike	radio, TV, VCD, water pump	5-15 chicken 5-10 cow 2 pigs	high school	enough	Have money to lend to neighbor and can lend money from the bank
Rich	35F	3%	5000-20000	Land Owner, Trader	5-10	bicycle, motorbike, cart, car, engine cart	radio, TV, VCD, rice miller, engine thresher	1-30 chicken 1-10 pigs 10-30 cow	Institute, university	more than enough	have money to lend to neighbor, group saving, can lend money from the bank
Total	1,147F	100%									

**Table B2.3.5 Result of Poverty Ranking at Pro Lay Po Irrigation System (Moung Ryssey River Basin)**

Classification	Number of Family	Percentage	1. Income		2. Asset				3. Education Level	4. Basic Human needs Satisfaction	5. Financial Transaction Experience
			Average Income per Day per Person (Riels)	Source of Income (main economic activity)	Land (ha)	Bicycles, motorcycles, cars, truck, tractors, etc.	TV, music, player, video, radio, etc	Livestock			
Destitute	256F	14%	0-700	Labor	0-0.5	old bicycle	small radio	0-3 chicken 1-2 cow (exchange labor)	primary school	enough for 3 months	Banks, farmer's group, money lenders, middlemen, pawnshop, etc...
Poor	886F	48%	700-2000	Labor out of village	0.5-1.5	bicycle, cart	radio, TV	1-5 chicken 2-3 cow (exchange labor) 2 own cow	secondary school	enough for 7 months	Can't lend money and debt from neighbor, paid them back through Labor
Fair	659F	36%	2000-7000	Land owner farmer, workers	1.5-5	bicycle, cart, motorbike, engine cart	radio, TV, VCD, water pump	5-25 chicken 100 ducks 2-5 cow 2 pigs pond fish	high school	enough	Have money to lend to neighbor and can lend money from the bank
Rich	26F	2%	7000-20000	Land Owner, Trader	5-30	bicycle, motorbike, cart, car, engine cart, truck, tractor	radio, TV, VCD, rice miller, engine thresher	5-15 cow 5-25 chicken 100-200 ducks	Institute, university	more than enough	have money to lend to neighbor, group saving, can lend money from the bank
Total	1,827F	100%									

**Table B2.3.6 Result of Poverty Ranking at Ream Kon Irrigation System (Moung Rysey River Basin)**

Classification	Number of Family	Percentage	1. Income		2. Asset				3. Education Level	4. Basic Human needs Satisfaction	5. Financial Transaction Experience
			Average Income per Day per Person (Riels)	Source of Income (main economic activity)	Land (ha)	Bicycles, motorcycles, cars, truck, tractors, etc.	TV, music, player, video, radio, etc	Livestock			
Destitute	128F	9%	0 - 1000	Labor	0-0.3	old bicycle	small radio	0-2 chicken 1-2 cow (exchange labor)	primary school	enough for 3 months	Banks, farmer's group, money lenders, middlemen, pawnshop, etc.. Can't lend money and debt from neighbor, paid them back through Labor
Poor	702F	52%	1000-3000	Labor out of village	0.3-1	bicycle, old motorbike	radio, TV	2-10 chicken 1-2 cow (exchange labor) 1 pig	secondary school	enough for 9 months	lend money from neighbor
Fair	474F	35%	3000-6000	Land owner farmer, workers	1-3	bicycle, cart, motorbike, car, truck	radio, TV, VCD, water pump, rice miller	10-25 chicken, 10-25 ducks 2-5 cow 1-2 pigs pond fish	high school	enough	Have money to lend to neighbor and can lend money from the bank
Rich	55F	4%	6000-20000	Land Owner, Trader	3-15	bicycle, motorbike, cart, car, engine cart, truck, tractor	radio, TV, VCD, rice miller, water pump, engine thresher	10-25 chicken, 10-25 ducks 10-20 cow 1-15 pigs pond fish	Institute, university	more than enough	have money to lend to neighbor, group saving, can lend money from the bank
Total	1,359F	100%									

**Table B2.3.7 Result of Poverty Ranking at Wat Loung Irrigation System (Moung Ryssey River Basin)**

Classification	Number of Family	Percentage	1. Income		2. Asset				3. Education Level	4. Basic Human needs Satisfaction	5. Financial Transaction Experience
			Average Income per Day per Person (Riels)	Source of Income (main economic activity)	Land (ha)	Bicycles, motorcycles, cars, truck, tractors, etc.	TV, music, player, video, radio, etc	Livestock			
Destitute	77F	25%	0-2000	Labor	0- 0.03	Old bicycle	nothing	0-2 chicken	primary school	enough for 2 months	Banks, farmer's group, money lenders, middlemen, pawnshop, etc..
Poor	171F	56.5%	2000-5000	Labor out of village	0.03-1	Bicycle, cart	radio, TV	2-5 chicken 2 cow	secondary school	enough for 6 months	Can't lend money and debt from neighbor, paid them back through Labor
Fair	49F	16.5%	5000-10000	Land owner farmer	1-3	Bicycle, cart, motorbike	radio, TV, hand phone	5 ducks 5-10 chicken 1-2 cow 1-2 pigs	high school drop-out	enough	Have money to lend to neighbor and can lend money from the bank
Rich	6F	2%	>10000	Land Owner, Trader	3-5	Bicycle, cart, Motorbike, car, Engine cart	radio, color TV, VCD, hand phone, rice miller, engine thresher	2 cow 1-5 pigs 5-10 chicken	high school	more than enough	have money to lend to neighbor, group saving, can lend money from the bank
Total	303F	100%									

**Table B2.3.8 Result of Poverty Ranking at Boeung Preah Ponley Irrigation System (Pursat River Basin)**

Classification	Number of Family	Percentage	1. Income		2. Asset				3. Education Level	4. Basic Human needs Satisfaction	5. Financial Transaction Experience
			Average Income per Day per Person (Riels)	Source of Income (main economic activity)	Land (ha)	Bicycles, motorcycles, cars, truck, tractors, etc.	TV, music, player, video, radio, etc	Livestock			
Destitute	74F	7%	0-500	Labor	0-0.01	old bicycle	small radio	0-5 chicken 1 pig	primary school drop-out	enough for 2 months	Can't lend money and debt from neighbor, paid them back through Labor
Poor	523F	46%	500-1500	Labor out of village	0.01-0.5	bicycle	radio	1-10 chicken 1-2 cow 1 pig	primary school	enough for 5 months	lend money from neighbor
Fair	499F	44%	1500-2500	Land owner farmer	0.5-1	bicycle, cart, motorbike	Radio, TV	5-20 chicken 1-3 cow 0-2 pigs	secondary school	enough	Have money to lend to neighbor and can lend money from the bank
Rich	36F	3%	2500-7000	Land Owner, Trader	1-2.5	bicycle, cart, motorbike, car, engine cart	Radio, TV, water pump, hand phone	3-5 cow 3-5 pigs 20-30 chicken 2-3 ducks	high school	more than enough	have money to lend to neighbor, can group saving, can lend money from the bank
Total	1,132F	100%									



**Table B2.3.9 Result of Poverty Ranking at Wat Chre Irrigation System (Pursat River Basin)**

Classification	Number of Family	Percentage	1. Income		2. Asset				3. Education Level	4. Basic Human needs Satisfaction	5. Financial Transaction Experience
			Average Income per Day per Person (Riels)	Source of Income (main economic activity)	Land (ha)	Bicycles, motorcycles, cars, truck, tractors, etc.	TV, music, player, video, radio, etc	Livestock			
Destitute	188F	29%	0-1200	Labor	0-0.005	old bicycle	Nothing	1-2 chicken	primary school drop-out	enough for 2 months	Banks, farmer's group, money lenders, middlemen, pawnshop, etc...
Poor	267F	42%	1200-2000	Labor out of village	0.005-0.5	bicycle, cart	radio	2-5 chicken 1-2 pigs 1-2 cow	primary school	enough for 6 months	Can't lend money and debt from neighbor, paid them back through Labor
Fair	151F	24%	2000-5000	Land owner farmer	0.5-1.5	bicycle, cart, motorbike	radio, TV, hand phone	5-10 chicken 2-4 cow 1-3 pigs	secondary school	enough	Have money to lend to neighbor and can lend money from the bank
Rich	32F	5%	>5000	Land Owner, Trader	1.5-4	bicycle, cart, motorbike, car, engine cart	radio, TV, hand phone, VCD	5-10 chicken 10 pigs 2-5 cow	high school	more than enough	have money to lend to neighbor, group saving, can lend money from the bank
Total	638F	100%									

**Table B2.3.10 Result of Poverty Ranking at Ta Ram Irrigation System (Boribo River Basin)**

Classification	Number of Family	Percentage	1. Income		2. Asset				3. Education Level	4. Basic Human needs Satisfaction	5. Financial Transaction Experience
			Average Income per Day per Person (Riels)	Source of Income (main economic activity)	Land (ha)	Bicycles, motorcycles, cars, truck, tractors, etc.	TV, music, player, video, radio, etc	Livestock			
Destitute	5F	2.5%	0-500	Labor	<0.5	Nothing	small radio	0-5 chicken	Adult	enough for 2 months	Banks, farmer's group, money lenders, middlemen, pawnshop, etc...
Poor	105F	52.5%	500-1000	Labor, go to forest	0.5-0.7	bicycle, cart	radio	5-10 chicken 1-2 pigs	primary school drop-out	enough for 6 months	Can't lend money and debt from neighbor
Fair	87F	43.5%	1000-2000	Trader, husbandry, bamboo cutting	1-1.5	bicycle, cart	motorbike, radio, TV	5-10 chicken 2-3 pigs 2-4 cow	secondary school drop-out	enough	Have money to lend to neighbor and can lend money from the bank
Rich	3F	1.5%	2000-5000	Money lender, trader, land owner	2-2.5	bicycle, cart, motorbike,	radio, color TV, VCD	10-15 chicken 2-3 pigs 5-10 cow	high school drop-out	more than enough	have money to lend to neighbor, group saving, can lend money from the bank
Total	200F	100%									

**Table B2.3.11 Result of Poverty Ranking at Khvet Irrigation System (Boribo River Basin)**

Classification	Number of Family	Percentage	1. Income		2. Asset				3. Education Level	4. Basic Human needs Satisfaction	5. Financial Transaction Experience
			Average Income per Day per Person (Riels)	Source of Income (main economic activity)	Land (ha)	Bicycles, motorcycles, cars, truck, tractors, etc.	TV, music, player, video, radio, etc	Livestock			
Destitute	57F	23%	0-500	Labor	0 -0.05	Nothing	small radio	Nothing	Adult	(food-rice)	Banks, farmer's group, money lenders, middlemen, pawnshop, etc..
Poor	95F	38%	500-1000	Labor out of village	0.5-1	bicycle, cart	radio	10-15 chicken	primary school drop-out	enough for 6 months	Can't lend money and debt from neighbor
Fair	91F	36%	1000-3000	Land owner farmer	1- 2.5	bicycle, motorbike, cart	Radio, TV, VCD	10-20 chicken 5-10 cow	primary school	enough	lend money from neighbor
Rich	6F	3%	3000-6000	Land Owner, Trader	3 - 6	bicycle, motorbike, car, cart	Radio, color TV, VCD, miller, hand phone	10-20 cow 10-20 chicken	Secondary school	enough	Have money to lend to neighbor and can lend money from the bank
Total	249F	100%							High school	more than enough	have money to lend to neighbor, group saving, can lend money from the bank

**Table B2.3.12 Result of Poverty Ranking at Lum Hach Irrigation System (Boribo River Basin)**

Classification	Number of Family	Percentage	1. Income		2. Asset				3. Education Level	4. Basic Human needs Satisfaction	5. Financial Transaction Experience	
			Average Income per Day per Person (Riels)	Source of Income (main economic activity)	Land (ha)	Bicycles, motorcycles, cars, truck, tractors, etc.	TV, music, player, video, radio, etc	Livestock				
Destitute	10F	9%	0-200	Labor	1	Nothing	Nothing	Nothing	0-2 chicken	Primary school drop-out	enough for 2 months	Can't lend money and debt from neighbor
Poor	56F	50%	200-500	Labor out of village	1 - 1.5	Bicycle, cart	Radio	Radio	5-10 chicken 1 Cow 1-2 pigs	Primary school	enough for 6 months	lend money from neighbor
Fair	42F	37%	500-1500	Land owner farmer	1.5 - 5	Bicycle, cart	Radio, Back and white TV	Radio, Back and white TV	20-30 chicken 2-5 Cow 2-3 Pigs	Primary school	enough	Have money to lend to neighbor and can lend money from the bank
Rich	4F	4%	>1500	Land Owner, Trader	>5	Bicycle, cart, Motorbike, Engine cart	rice miller, Radio, Color TV, VCD	rice miller, Radio, Color TV, VCD	>30 chicken >10 Cow >10 Pigs	Primary and Secondary school	more than enough	have money to lend to neighbor, can group saving, can lend money from the bank
Total	112F	100%										

**Table B2.3-13 Result of Problems Census at Vat Balat Irrigation System (Battambang River Basin)**

Rank	Problems	Problem Solution
I	Lack of water for irrigation	Request to rehabilitate irrigation scheme and Need to participate for FWUG to manage, operate and maintenance of the scheme.
II	Lack of techniques for agriculture	Ask for supporting from Ministry, Department and Institutional are related with the project to come for help, to send extension worker for agriculture to train the farmers at the sites.
III	Lack of capital for agriculture	Ask for supporting from Authorities to coordinate with the bank for the farmer can lend the money and can be organized community help each other.
IV	Lack of market for agriculture production	Request to Government to find the market for Agriculture production in Cambodia or outside the country.
V	Lack of good production seed	Ask for supporting from Ministry, Department and Institutional are related with the project to come for help, to provide good seed to the farmers.

**Table B2.3-14 Result of Problems Census at Thmat Pong Irrigation System (Battambang River Basin)**

Rank	Problems	Problem Solution
I	Lack of water for irrigation	Request to rehabilitate irrigation scheme
II	High cost of fuel	Request to Government to decrease Tax for fuel import or ask for new company to produce gas or other oil that produce from Agri-industry instead of fuel.
III	Lack of techniques for agriculture	Ask for supporting from Ministry, Department and Institutional are related with the project to come for help, to send extension worker for agriculture to train the farmers at the sites.
IV	Lack of participatory for water distribution	Need to participate for FWUG to manage, operate and maintenance of the scheme.
V	Lack of good production seed	Ask for supporting from Ministry, Department and Institutional are related with the project to come for help, to provide good seed to the farmers.

**Table B2.3-15 Result of Problems Census at Bot Sala Irrigation System (Battambang River Basin)**

Rank	Problems	Problem Solution
I	Lack of water for irrigation	Request to rehabilitate irrigation scheme
II	Lack of techniques for agriculture, Lack of participatory for water distribution	Ask for supporting from Ministry, Department and Institutional are related with the project to come for help, to send extension worker for agriculture to train the farmers at the sites.
III	Lack of participatory for water distribution, Lack of technical for	Need to participate for FWUG to manage, operate and maintenance of the scheme.
IV	Lack of good production seed, Lack of capital for agriculture	Ask for supporting from Ministry, Department and Institutional are related with the project to come for help, to provide good seed to the farmers.
V	Lack of capital for agriculture, Lack of good production seed	Ask for supporting from Authorities to coordinate with the bank for the farmer can lend the money and can be organized community help each other.

**Table B2.3-16 Result of Problems Census at Prek Chik Irrigation System  
(Moung Russey River Basin)**

Rank	Problems	Problem Solution
I	Lack of water for irrigation	Request to rehabilitate irrigation scheme and Need to participate for FWUG to manage, operate and maintenance of the scheme.
II	Lack of techniques for agriculture	Ask for supporting from Ministry, Department and Institutional are related with the project to come for help, to send extension worker for agriculture to train the farmers at the sites.
III	Lack of capital for agriculture, Lack of communication from institutional	Ask for supporting from Authorities to coordinate with the bank for the farmer can lend the money and can be organized community help each other.
IV	Lack of communication from institutional, Lack of capital for agriculture	Ask for all Authorities, Institutional, Ministries, Department and OI, NGOs are related with project in the target are should good coordinating each other to help the farmers.
V	Lack of good production seed	Ask for supporting from Ministry, Department and Institutional are related with the project to come for help, to provide good seed to the farmers.

**Table B2.3-17 Result of Problems Census at Por Canal Irrigation System  
(Moung Russey River Basin)**

Rank	Problems	Problem Solution
I	Lack of water for irrigation	Request to rehabilitate irrigation scheme
II	Lack of techniques for agriculture	Ask for supporting from Ministry, Department and Institutional are related with the project to come for help, to send extension worker for agriculture to train the farmers at the sites.
III	Lack of participatory	Need to participate for FWUG to manage, operate and maintenance of the scheme.
IV	Lack of good production seed	Ask for supporting from Ministry, Department and Institutional are related with the project to come for help, to provide good seed to the farmers.
V	Lack of water pump station	Request for water pump station or study for detail of irrigation scheme all farmers.

**Table B2.3-18 Result of Problems Census at Ream Kon Irrigation System  
(Moung Russey River Basin)**

Rank	Problems	Problem Solution
I	Lack of water for irrigation	Request to rehabilitate irrigation scheme
II	Lack of techniques for agriculture	Ask for supporting from Ministry, Department and Institutional are related with the project to come for help, to send extension worker for agriculture to train the farmers at the sites.
III	Lack of good production seed	Ask for supporting from Ministry, Department and Institutional are related with the project to come for help, to provide good seed to the farmers.
IV	Lack of community water distribution	Need to participate for FWUG to manage, operate and maintenance of the scheme.
V	Lack of market for Agriculture production	Request to Government to find the market for Agriculture production in Cambodia or outside the country.

**Table B2.3-19 Result of Problems Census at Wat Loung Irrigation System (Pursat River Basin)**

Rank	Problems	Problem Solution
I	Lack of water for irrigation	Request to rehabilitate irrigation scheme and need to participate for FWUG to manage, operate and maintenance of the scheme.
II	Lack of capital for agriculture	Ask for supporting from Authorities to coordinate with the bank for the farmer can lend the money and can be organized community help each other.
III	Lack of techniques for agriculture	Ask for supporting from Ministry, Department and Institutional are related with the project to come for help, to send extension worker for agriculture to train the farmers at the sites.
IV	Low cost of paddy, Insect destroyed	Request to Government to find the market for Agriculture production in Cambodia or outside the country.
V	Insect destroyed, Low cost of paddy	Ask for supporting from Ministry, Department and Institutional are related with the project to come for help, to send extension worker for agriculture to train the farmers at the sites.

**Table B2.3-20 Result of Problems Census at Boeung Preah Ponley Irrigation System (Pursat River Basin)**

Rank	Problems	Problem Solution
I	Lack of water for irrigation	Request to rehabilitate irrigation scheme
II	Lack of techniques for agriculture	Ask for supporting from Ministry, Department and Institutional are related with the project to come for help, to send extension worker for agriculture to train the farmers at the sites.
III	Lack of participatory to solve problem of water	Need to participate for FWUG to manage, operate and maintenance of the scheme.
IV	Lack of capital for agriculture, Low cost of paddy	Ask for supporting from Authorities to coordinate with the bank for the farmer can lend the money and can be organized community help each other.
V	Low cost of paddy, Lack of capital for agriculture	Request to Government to find the market for Agriculture production in Cambodia or outside the country.

**Table B2.3-21 Result of Problems Census at Wat Chre Irrigation System (Pursat River Basin)**

Rank	Problems	Problem Solution
I	Lack of water for irrigation	Request to rehabilitate irrigation scheme
II	Lack of techniques for agriculture	Ask for supporting from Ministry, Department and Institutional are related with the project to come for help, to send extension worker for agriculture to train the farmers at the sites.
III	Lack of participatory	Need to participate for FWUG to manage, operate and maintenance of the scheme.
IV	Lack of good production seed	Ask for supporting from Ministry, Department and Institutional are related with the project to come for help, to provide good seed to the farmers.
V	Lack of capital for agriculture	Ask for supporting from Authorities to coordinate with the bank for the farmer can lend the money and can be organized community help each other.

**Table B2.3-22 Result of Problems Census at Ta Ram Irrigation System (Boribo River Basin)**

Rank	Problem	Problem Solution
I	Lack of water for irrigation	Request to rehabilitate irrigation scheme and agreed to participate for FWUG to manage, operate and maintenance of the scheme.
II	Insect destroyed	Ask for supporting from Ministry, Department and Institutional are related with the project to come for help, to send extension worker for agriculture to train the farmers at the sites.
III	Lack of techniques for agriculture	Ask for supporting from Ministry, Department and Institutional are related with the project to come for help, to send extension worker for agriculture to train the farmers at the sites.
IV	Lack of animal for agriculture	Ask for supporting from Authorities to coordinate with the bank for the farmer can lend the money and can be organized community help each other.
V	Low quality of rice field	Ask for supporting from Ministry, Department and Institutional are related with the project to come for help, to send extension worker for agriculture to train the farmers at the sites.

**Table B2.3-23 Result of Problems Census at Khvet Irrigation System (Boribo River Basin)**

Rank	Problems	Problem Solution
I	Lack of water for irrigation	Request to rehabilitate irrigation scheme
II	Lack of animal for agriculture	Ask for supporting from Authorities to coordinate with the bank for the farmer can lend the money and can be organized community help each other.
III	Lack participatory	Need to participate for FWUG to manage, operate and maintenance of the scheme.
IV	Lack of good production seed	Ask for supporting from Ministry, Department and Institutional are related with the project to come for help, to send extension worker for agriculture to train the farmers at the sites.
V	Lack of techniques for agriculture	Ask for supporting from Ministry, Department and Institutional are related with the project to come for help, to send extension worker for agriculture to train the farmers at the sites.

**Table B2.3-24 Result of Problems Census at Lum Hach Irrigation System (Boribo River Basin)**

Rank	Problems	Problem Solution
I	Lack of water for irrigation	Request to rehabilitate irrigation scheme and need to participate for FWUG to manage, operate and maintenance of the scheme.
II	Lack of techniques for agriculture	Ask for supporting from Ministry, Department and Institutional are related with the project to come for help, to send extension worker for agriculture to train the farmers at the sites.
III	Lack of animal for agriculture, Bad road to market	Ask for supporting from Authorities to coordinate with the bank for the farmer can lend the money and can be organized community help each other.
IV	Bad road to market, Lack of animal for agriculture	Request to rehabilitate existing road to market for agriculture production.
V	Low quality of rice field	Ask for supporting from Ministry, Department and Institutional are related with the project to come for help, to send extension worker for agriculture to train the farmers at the sites.



**Table B3.2-1 Result of Household Survey (1/15)**

Question		Irrigation System & No. of Samples		Battambang			Moung Russey			Pursat			Boribo			Whole
				Vat Baat	Thmat Pong	Boat Sala	Prek Chik	Prolay Po	Ream Kon	Wat Loung	B. P. Ponley	Wat Chrea	Taram	Khvet	Lum Hach	
				40	40	30	40	40	40	40	50	40	30	30	60	
<b>PART 1</b>	<b>SOCIO-ECONOMY</b>															
<b>SECTION I</b>	<b>GENERAL INFORMATION</b>															
1-7	<b>Main activity of the household</b>															
1	Farmer	100.0 %	100.0 %	96.7 %	95.0 %	95.0 %	97.5 %	92.5 %	92.0 %	100.0 %	96.7 %	100.0 %	95.0 %	96.5 %		
2	On-farm labor										3.3 %		1.7 %	0.4 %		
3	Non-farm labor							5.0 %						0.4 %		
4	Salary worker						2.5 %		2.0 %					0.4 %		
5	Private business				2.5 %			2.5 %	4.0 %					0.8 %		
6	Others			3.3 %	2.5 %	2.5 %	2.5 %		2.0 %				3.3 %	1.5 %		
1-8	<b>Education carrier of interviewee</b>															
1	No formal education	12.5 %	10.0 %	10.0 %	12.5 %	10.0 %	2.5 %	15.0 %	8.0 %	25.0 %	36.7 %	26.7 %	13.3 %	14.4 %		
2	Drop-out at primary school	42.5 %	45.0 %	56.7 %	50.0 %	35.0 %	35.0 %	42.5 %	52.0 %	42.5 %	56.7 %	40.0 %	65.0 %	47.5 %		
3	Graduate from primary school	15.0 %	10.0 %	16.7 %	25.0 %	17.5 %	22.5 %	25.0 %	14.0 %	12.5 %	3.3 %	16.7 %	11.7 %	15.8 %		
4	Drop-out at junior high school	20.0 %	25.0 %	6.7 %	5.0 %	20.0 %	32.5 %	5.0 %	20.0 %	15.0 %	3.3 %	3.3 %	3.3 %	13.5 %		
5	Graduate from junior high school	7.5 %	2.5 %	6.7 %	5.0 %	10.0 %	5.0 %	5.0 %	2.0 %				3.3 %	4.0 %		
6	Drop-out at high school		7.5 %				2.5 %	2.5 %	5.0 %	5.0 %			1.7 %	2.3 %		
7	Graduate from high school	2.5 %			2.5 %	2.5 %								0.6 %		
8	More than high school					2.5 %			2.0 %				1.7 %	0.6 %		
	Others			3.3 %				2.5 %			13.3 %			1.3 %		
1-9	<b>Main occupation of household members other than respondent</b>															
1	Farmer	90.0 %	7.5 %	80.0 %	87.5 %	87.5 %	82.5 %	85.0 %	74.0 %	72.5 %	70.0 %	83.3 %	86.7 %	75.8 %		
2	On-farm labor								2.0 %			3.3 %		0.4 %		
3	Non-farm labor		2.5 %		2.5 %	2.5 %		2.5 %	4.0 %	5.0 %	3.3 %		1.7 %	2.1 %		
4	Salary worker									2.5 %				0.2 %		
5	Private business			3.3 %		2.5 %				2.5 %				0.6 %		
6	Housekeeping	2.5 %		3.3 %	7.5 %	7.5 %	12.5 %	2.5 %	8.0 %	2.5 %	6.7 %		3.3 %	4.8 %		
7	No job							2.5 %	4.0 %	2.5 %			5.0 %	1.5 %		
8	Student	2.5 %	15.0 %		2.5 %		2.5 %	2.5 %	2.0 %	5.0 %	3.3 %	3.3 %		3.1 %		
9	Child		5.0 %											0.4 %		
10	Others	5.0 %	70.0 %	13.3 %			2.5 %	5.0 %	6.0 %	7.5 %	16.7 %	10.0 %	3.3 %	11.0 %		
1-10	<b>Member of village organization</b>															
1	Farmer's water users' community	2.5 %	7.5 %		37.5 %	40.0 %	42.5 %		4.0 %					11.3 %		
2	Credit group by government				2.5 %									0.2 %		
3	Micro-credit group by NGO		2.5 %	3.3 %	2.5 %	5.0 %	5.0 %		2.0 %			6.7 %		2.1 %		
4	Production group				7.5 %	2.5 %								0.8 %		
5	Religion group	5.0 %	2.5 %		2.5 %				2.0 %	2.5 %	10.0 %			2.3 %		
6	Drinking water users' group															
7	Marketing group				7.5 %	2.5 %	2.5 %							1.0 %		
8	Youth group				40.0 %	45.0 %	30.0 %		4.0 %					10.0 %		
9	Veteran group	5.0 %	2.5 %	3.3 %			5.0 %	7.5 %	2.0 %	10.0 %	3.3 %	6.7 %		3.5 %		
10	Women's group					2.5 %	5.0 %							0.6 %		
11	Others	87.5 %	85.0 %	93.3 %		2.5 %	5.0 %	92.5 %	86.0 %	87.5 %	86.7 %	86.7 %	100.0 %	68.1 %		
<b>SECTION II</b>	<b>LIVING CONDITION</b>															
II-1	<b>Drinking water source</b>															
Dry season	<b>Water source</b>															
1	Piped	12.5 %	5.0 %				5.0 %	2.5 %					1.7 %	2.3 %		
2	Tube pipe well	2.5 %		13.3 %	52.5 %	7.5 %	60.0 %	22.5 %	32.0 %	25.0 %	80.0 %	66.7 %	3.3 %	27.9 %		
3	Dug well	30.0 %	22.5 %	16.7 %	10.0 %	12.5 %	15.0 %	40.0 %	56.0 %	37.5 %	13.3 %	10.0 %	85.0 %	32.9 %		
4	Reservoir/ Pond	12.5 %	17.5 %	6.7 %	7.5 %	50.0 %	12.5 %		2.0 %	12.5 %			3.3 %	10.4 %		
5	Spring/River	5.0 %	30.0 %	40.0 %	15.0 %	10.0 %		35.0 %		7.5 %	6.7 %	20.0 %		12.7 %		
6	Bought	15.0 %	2.5 %	6.7 %	7.5 %	2.5 %								2.7 %		
7	Rain	15.0 %	12.5 %	6.7 %	7.5 %	7.5 %	7.5 %			12.5 %				5.6 %		
8	Others	7.5 %	10.0 %	10.0 %		10.0 %			10.0 %	5.0 %		3.3 %	6.7 %	5.4 %		
Wet season	<b>Water source</b>															
1	Piped	12.5 %	5.0 %	3.3 %			7.5 %	2.5 %						2.5 %		
2	Tube pipe well	2.5 %		10.0 %	2.5 %	2.5 %	52.5 %	25.0 %	24.0 %	10.0 %	63.3 %	53.3 %	1.7 %	18.5 %		
3	Dug well	27.5 %	10.0 %	13.3 %	10.0 %	10.0 %	10.0 %	30.0 %	36.0 %	25.0 %	26.7 %	30.0 %	86.7 %	28.2 %		
4	Reservoir/ Pond	22.5 %	15.0 %		17.5 %	17.5 %	2.5 %	2.5 %	8.0 %	7.5 %			1.7 %	8.1 %		
5	Spring/River	7.5 %	15.0 %	30.0 %	10.0 %	10.0 %		2.5 %	15.0 %		6.7 %	10.0 %	1.7 %	8.8 %		
6	Bought	17.5 %	2.5 %	3.3 %										1.9 %		
7	Rain	5.0 %	45.0 %	40.0 %	52.5 %	52.5 %	25.0 %	25.0 %	24.0 %	45.0 %	3.3 %	3.3 %	3.3 %	26.7 %		
8	Others	5.0 %	7.5 %		7.5 %	7.5 %			8.0 %	5.0 %		3.3 %	5.0 %	4.4 %		
II-2	<b>For domestic use</b>															
Dry season	<b>Water source</b>															
1	Piped	12.5 %	2.5 %		2.5 %		2.5 %	2.5 %					1.7 %	2.1 %		
2	Tube pipe well			13.3 %	52.5 %	7.5 %	62.5 %	25.0 %	32.0 %	25.0 %	80.0 %	60.0 %	3.3 %	27.7 %		
3	Dug well	25.0 %	27.5 %	20.0 %	10.0 %	15.0 %	17.5 %	37.5 %	52.0 %	37.5 %	13.3 %	16.7 %	85.0 %	33.3 %		
4	Reservoir/ Pond	17.5 %	17.5 %	6.7 %	7.5 %	47.5 %	15.0 %		8.0 %	25.0 %			1.7 %	12.1 %		
5	Spring/River		32.5 %	43.3 %	22.5 %	12.5 %		35.0 %		7.5 %	6.7 %	20.0 %	1.7 %	13.8 %		
6	Bought	10.0 %		6.7 %	5.0 %	2.5 %								1.9 %		
7	Rain	35.0 %	5.0 %	3.3 %		2.5 %	2.5 %							4.0 %		
8	Others		15.0 %	6.7 %		12.5 %			10.0 %	5.0 %		3.3 %	6.7 %	5.2 %		
Wet season	<b>Water source</b>															
1	Piped	12.5 %	2.5 %	3.3 %			2.5 %	2.5 %						1.9 %		
2	Tube pipe well	2.5 %		10.0 %	40.0 %	2.5 %	60.0 %	25.0 %	26.0 %	10.0 %	60.0 %	50.0 %	1.7 %	22.1 %		
3	Dug well	27.5 %	17.5 %	16.7 %	12.5 %	17.5 %	10.0 %	35.0 %	36.0 %	27.5 %	26.7 %	30.0 %	86.7 %	31.5 %		
4	Reservoir/ Pond	22.5 %	15.0 %		7.5 %	25.0 %	7.5 %	2.5 %	10.0 %	20.0 %			1.7 %	9.6 %		
5	Spring/River	7.5 %	15.0 %	33.3 %	17.5 %	15.0 %	2.5 %	17.5 %		10.0 %	6.7 %	10.0 %	1.7 %	10.4 %		
6	Bought	17.5 %		3.3 %										1.7 %		
7	Rain	5.0 %	37.5 %	33.3 %	15.0 %	35.0 %	17.5 %	17.5 %	20.0 %	27.5 %	6.7 %	6.7 %	1.7 %	18.1 %		
8	Others	5.0 %	12.5 %		7.5 %	5.0 %			8.0 %	5.0 %		3.3 %	6.7 %	4.8 %		

**Table B3.2-1 Result of Household Survey (2/15)**

Question		Irrigation System & No. of Samples												Whole	
		Battambang			Moung Russey			Pursat			Boribo				
		Vat Balat	Thmat Pong	Baot Sala	Prek Chik	Proloy Po	Ream Kon	Wat Loung	B. P. Ponleay	Wat Chrea	Taram	Khvet	Lum Hech		
		40	40	30	40	40	40	40	50	40	30	30	60	480	
II-3	<b>Fuel source for cooking</b>														
	<b>Fuel source</b>														
	1 Firewood	90.0 %	92.5 %	96.7 %	95.0 %	95.0 %	92.5 %	97.5 %	98.0 %	100.0 %	100.0 %	96.7 %	100.0 %	96.3 %	
	2 Kerosene						2.5 %							0.2 %	
	3 Charcoal	10.0 %	5.0 %		5.0 %	2.5 %	5.0 %	2.5 %	2.0 %			3.3 %		2.9 %	
	4 Gas cylinder (LPG)														
	5 Electricity														
6 Others		2.5 %	3.3 %		2.5 %								0.6 %		
	<b>Availability</b>														
1 Easy to obtain	82.5 %	67.5 %	70.0 %	77.5 %	82.5 %	87.5 %	75.0 %	74.0 %	45.0 %	96.7 %	90.0 %	96.7 %	79.0 %		
2 Difficult to obtain	17.5 %	30.0 %	30.0 %	22.5 %	17.5 %	12.5 %	25.0 %	26.0 %	52.5 %	3.3 %	10.0 %	3.3 %	20.6 %		
3 Very difficult to obtain		2.5 %							2.5 %				0.4 %		
II-4	<b>Fuel source for lightening</b>														
	<b>Fuel source</b>														
	1 Firewood	5.0 %		16.7 %	2.5 %	15.0 %	12.5 %	7.5 %	6.0 %	15.0 %	10.0 %		6.7 %	7.9 %	
	2 Kerosene	20.0 %	62.5 %	63.3 %	77.5 %	42.5 %	55.0 %	82.5 %	84.0 %	70.0 %	76.7 %	90.0 %	80.0 %	67.3 %	
	3 Charcoal	2.5 %	5.0 %		2.5 %				4.0 %					1.7 %	
	4 Gas cylinder (LPG)														
	5 Electricity	62.5 %	12.5 %				7.5 %			5.0 %				1.7 %	
	6 Others	10.0 %	20.0 %	20.0 %	17.5 %	42.5 %	25.0 %	10.0 %	6.0 %	10.0 %	13.3 %	10.0 %	10.0 %	15.8 %	
		<b>Availability</b>													
	1 Easy to obtain	92.5 %	80.0 %	76.7 %	80.0 %	80.0 %	90.0 %	77.5 %	74.0 %	80.0 %	70.0 %	56.7 %	73.3 %	77.9 %	
	2 Difficult to obtain	7.5 %	20.0 %	23.3 %	20.0 %	20.0 %	10.0 %	20.0 %	24.0 %	20.0 %	23.3 %	36.7 %	21.7 %	20.2 %	
	3 Very difficult to obtain							2.5 %	2.0 %		6.7 %	6.7 %	5.0 %	1.9 %	
	II-5	<b>Facilities in your household (YES)</b>													
1 Radio		60.0 %	65.0 %	66.7 %	55.0 %	60.0 %	57.5 %	67.5 %	56.0 %	42.5 %	26.7 %	30.0 %	40.0 %	52.5 %	
2 TV		82.5 %	82.5 %	66.7 %	52.5 %	62.5 %	75.0 %	55.0 %	52.0 %	42.5 %	20.0 %	26.7 %	15.0 %	52.1 %	
3 Bicycle		87.5 %	100.0 %	86.7 %	85.0 %	82.5 %	87.5 %	87.5 %	86.0 %	82.5 %	63.3 %	56.7 %	88.3 %	84.0 %	
4 Motorcycle		75.0 %	57.5 %	43.3 %	30.0 %	45.0 %	37.5 %	45.0 %	30.0 %	27.5 %	16.7 %	36.7 %	10.0 %	36.9 %	
5 Car		5.0 %				5.0 %		2.5 %	2.0 %		3.3 %	3.3 %		1.7 %	
6 Audio (CD/ cassette player)		32.5 %	22.5 %		22.5 %	12.5 %	17.5 %	10.0 %	6.0 %	12.5 %	6.7 %	23.3 %	10.0 %	14.6 %	
7 VCR		30.0 %	12.5 %	10.0 %	22.5 %	22.5 %	10.0 %	10.0 %		10.0 %	3.3 %	10.0 %	5.0 %	11.9 %	
8 Row boat		2.5 %				17.5 %			2.5 %					1.9 %	
9 Boat with motor		5.0 %				7.5 %		5.0 %						1.5 %	
10 Tractor		7.5 %	5.0 %	13.3 %	5.0 %	12.5 %	10.0 %	2.5 %		2.5 %				4.6 %	
11 Power generator		2.5 %	10.0 %			5.0 %					3.3 %	3.3 %		1.9 %	
12 Electric Fan		47.5 %	15.0 %			5.0 %	5.0 %	2.5 %	2.0 %					6.5 %	
13 Refrigerator		2.5 %	2.5 %		2.5 %									0.6 %	
14 Mosquito net		97.5 %	100.0 %	96.7 %	95.0 %	100.0 %	100.0 %	100.0 %	100.0 %	100.0 %	100.0 %	96.7 %	98.3 %	98.8 %	
15 Cellular Telephone		42.5 %	30.0 %	10.0 %	17.5 %	30.0 %	15.0 %	15.0 %	14.0 %	25.0 %	3.3 %	3.3 %		17.1 %	
16 Telephone															
17 Weaving machine				3.3 %										0.2 %	
18 Ox cart		30.0 %	40.0 %	50.0 %	42.5 %	37.5 %	27.5 %	52.5 %	50.0 %	57.5 %	73.3 %	70.0 %	58.3 %	48.5 %	
19 Water pump		32.5 %	37.5 %	36.7 %	17.5 %	42.5 %	30.0 %	35.0 %	6.0 %	20.0 %	6.7 %	3.3 %	3.3 %	21.9 %	
20 Chemical sprayer		17.5 %	32.5 %	23.3 %	12.5 %	25.0 %	10.0 %	12.5 %	2.0 %	7.5 %		3.3 %		11.7 %	
II-6	<b>Residence</b>														
	<b>Ownership</b>														
	1 Owned (already paid)	92.5 %	100.0 %	90.0 %	90.0 %	92.5 %	97.5 %	82.5 %	94.0 %	95.0 %	93.3 %	100.0 %	98.3 %	94.0 %	
	2 Owner (under payment)	2.5 %		6.7 %	10.0 %	2.5 %		10.0 %	2.0 %		3.3 %		1.7 %	3.1 %	
	3 Rent	5.0 %		3.3 %		5.0 %	2.5 %	7.5 %	4.0 %	5.0 %	3.3 %			2.9 %	
	4 Borrow														
	5 Others														
		<b>Material</b>													
	1 Cement and bricks	10.0 %		3.3 %	7.5 %	10.0 %	5.0 %	2.5 %	4.0 %	2.5 %	6.7 %			4.2 %	
	2 Palm leaves	5.0 %	12.5 %	13.3 %	10.0 %	20.0 %	7.5 %	17.5 %	26.0 %	15.0 %	16.7 %	13.3 %	38.3 %	17.5 %	
	3 Wood	82.5 %	87.5 %	80.0 %	80.0 %	70.0 %	87.5 %	77.5 %	68.0 %	82.5 %	73.3 %	86.7 %	56.7 %	76.5 %	
	4 Others	2.5 %		3.3 %	2.5 %			2.5 %	2.0 %		3.3 %		5.0 %	1.9 %	
		<b>Type of House</b>													
	1 Traditional	87.5 %	95.0 %	93.3 %	95.0 %	95.0 %	95.0 %	70.0 %	88.0 %	92.5 %	100.0 %	93.3 %	91.7 %	91.0 %	
	2 One stored	7.5 %	5.0 %	3.3 %	2.5 %	2.5 %	5.0 %	5.0 %	6.0 %	5.0 %			1.7 %	3.8 %	
	3 Two stored	2.5 %						2.5 %						0.4 %	
	4 Others	2.5 %		3.3 %	2.5 %	2.5 %		22.5 %	6.0 %	2.5 %		6.7 %	6.7 %	4.8 %	
		<b>Number of rooms</b>													
	Toilet (Number YES)	67.5 %	52.5 %	46.7 %	10.0 %	35.0 %	40.0 %	7.5 %	12.0 %	12.5 %	3.3 %	6.7 %	1.7 %	23.8 %	
	Electrical Supply	60.0 %	12.5 %				7.5 %			2.5 %			1.7 %	7.1 %	
	Piped Water Supply	37.5 %			2.5 %					2.5 %				3.5 %	
Gas Line Supply	2.5 %												0.2 %		
Land telephone line															
II-7	<b>Social Service</b>														
	<b>Health and medical service</b>														
	<b>When you/ your family get/gets sick, Where do you go?</b>														
	1 Hospital	32.5 %	10.0 %	16.7 %	5.0 %	17.5 %	17.5 %		4.0 %	20.0 %	10.0 %		5.0 %	11.3 %	
	2 Clinic	15.0 %	5.0 %	6.7 %	2.5 %	12.5 %	5.0 %	2.5 %		2.5 %	10.0 %			4.8 %	
	3 Health Center	42.5 %	82.5 %	63.3 %	87.5 %	60.0 %	75.0 %	97.5 %	94.0 %	77.5 %	80.0 %	80.0 %	88.3 %	78.3 %	
	4 Others	10.0 %	2.5 %	13.3 %	5.0 %	10.0 %	2.5 %		2.0 %			20.0 %	6.7 %	5.6 %	
	<b>How do you go there?</b>														
	1 Walk	7.5 %	7.5 %	13.3 %	20.0 %	10.0 %	12.5 %	22.5 %	10.0 %	27.5 %	20.0 %	6.7 %	15.0 %	14.4 %	
	2 Bike taxi	22.5 %	42.5 %	33.3 %	27.5 %	27.5 %	25.0 %	2.5 %	20.0 %	15.0 %	26.7 %	40.0 %	26.7 %	25.2 %	
3 Owned motorbike	62.5 %	35.0 %	33.3 %	27.5 %	45.0 %	47.5 %	40.0 %	24.0 %	20.0 %	13.3 %	30.0 %	6.7 %	31.3 %		
4 Bicycle	7.5 %	12.5 %	13.3 %	12.5 %	5.0 %	10.0 %	32.5 %	42.0 %	37.5 %	16.7 %	10.0 %	46.7 %	22.5 %		
5 Others		2.5 %	6.7 %	12.5 %	12.5 %	5.0 %	2.5 %	4.0 %		23.3 %	13.3 %	5.0 %	6.7 %		
2 Reproductive Health															

**Table B3.2-1 Result of Household Survey (3/15)**

Question	Irrigation System & No. of Samples	Battambang			Moung Russey			Pursat			Boribo			Whole 480
		Vat Balat	Thmat Pong	Baot Sala	Prek Chik	Prolay Po	Ream Kon	Wat Loung	B. P. Ponlay	Wat Chrea	Taram	Khvet	Lum Hach	
		40	40	30	40	40	40	40	50	40	30	30	60	
<b>When you/ your wife delivers a baby, Where do you go?</b>														
1	Hospital	20.0 %	10.0 %	6.7 %	5.0 %	10.0 %	7.5 %	2.5 %	4.0 %	17.5 %	3.3 %		6.7 %	7.9 %
2	Clinic	2.5 %	2.5 %	3.3 %		2.5 %	5.0 %							1.3 %
3	Health Center	20.0 %	30.0 %	40.0 %	45.0 %	35.0 %	55.0 %	75.0 %	48.0 %	27.5 %	26.7 %	30.0 %	23.3 %	37.9 %
4	TBA			3.3 %										0.2 %
5	Traditional Dr.	10.0 %	20.0 %	13.3 %	10.0 %	5.0 %	2.5 %	5.0 %	12.0 %	17.5 %	40.0 %	23.3 %	26.7 %	15.2 %
6	Midwife	40.0 %	37.5 %	23.3 %	27.5 %	35.0 %	20.0 %	12.5 %	34.0 %	25.0 %	16.7 %	20.0 %	25.0 %	26.9 %
7	Others	7.5 %		10.0 %	12.5 %	12.5 %	10.0 %	5.0 %	2.0 %	12.5 %	13.3 %	26.7 %	18.3 %	10.6 %
<b>How do you go there?</b>														
1	Walk	15.0 %	17.5 %	3.3 %	15.0 %	7.5 %	17.5 %	10.0 %	28.0 %	30.0 %	26.7 %	30.0 %	21.7 %	18.8 %
2	Bike taxi	15.0 %	25.0 %	33.3 %	22.5 %	22.5 %	22.5 %	22.5 %	38.0 %	12.5 %	6.7 %	20.0 %	25.0 %	22.7 %
3	Owned motorbike	32.5 %	17.5 %	30.0 %	30.0 %	30.0 %	30.0 %	32.5 %	20.0 %	15.0 %	10.0 %	6.7 %	3.3 %	21.0 %
4	Bicycle	5.0 %	7.5 %		2.5 %	5.0 %		17.5 %	8.0 %	7.5 %	6.7 %	10.0 %	10.0 %	6.9 %
5	Others	32.5 %	32.5 %	33.3 %	30.0 %	35.0 %	30.0 %	17.5 %	6.0 %	35.0 %	50.0 %	33.3 %	40.0 %	30.6 %
<b>How long does it take to be there?</b>														
<b>Do you have any social security service/ insurance?</b>														
1	Yes						10.0 %							0.8 %
2	No	100.0 %	100.0 %	100.0 %	100.0 %	100.0 %	90.0 %	100.0 %	100.0 %	100.0 %	100.0 %	100.0 %	100.0 %	99.2 %
<b>Gender in Development</b>														
<b>1 Marriage</b>														
<b>How old usually do women get married in your village?,</b>														
1	15-17								8.0 %		3.3 %		1.7 %	1.3 %
2	18-20	72.5 %	77.5 %	83.3 %	75.0 %	82.5 %	75.0 %	80.0 %	78.0 %	85.0 %	70.0 %	86.7 %	83.3 %	79.2 %
3	21-23	22.5 %	22.5 %	16.7 %	25.0 %	17.5 %	20.0 %	20.0 %	14.0 %	15.0 %		13.3 %	13.3 %	16.9 %
4	24-26	5.0 %					5.0 %					23.3 %	1.7 %	2.5 %
5	27-29										3.3 %			0.2 %
6	Older than 30													
<b>2 Daily activities</b>														
<b>What are FEMALE's main activities in your village?</b>														
1	Housekeeping	82.5 %	82.5 %	70.0 %	75.0 %	87.5 %	80.0 %	90.0 %	78.0 %	82.5 %	76.7 %	83.3 %	83.3 %	81.3 %
2	Cooking	67.5 %	77.5 %	86.7 %	82.5 %	77.5 %	80.0 %	92.5 %	80.0 %	65.0 %	70.0 %	73.3 %	75.0 %	77.3 %
3	Farming	80.0 %	92.5 %	93.3 %	90.0 %	87.5 %	90.0 %	97.5 %	68.0 %	82.5 %	80.0 %	90.0 %	81.7 %	87.5 %
4	Handy crafting	7.5 %				2.5 %			2.0 %	5.0 %	6.7 %	6.7 %	6.7 %	3.1 %
5	Care of children/ elders	45.0 %	47.5 %	53.3 %	55.0 %	52.5 %	52.5 %	87.5 %	52.0 %	50.0 %	60.0 %	60.0 %	45.0 %	54.4 %
6	Care of livestock	25.0 %	32.5 %	26.7 %	27.5 %	25.0 %	20.0 %	75.0 %	44.0 %	25.0 %	23.3 %	43.3 %	40.0 %	34.6 %
7	Making Palm sugar	2.5 %								5.0 %			5.0 %	1.3 %
8	Others	22.5 %	25.0 %	20.0 %	17.5 %	17.5 %	17.5 %	15.0 %	20.0 %	20.0 %	3.3 %	10.0 %	1.7 %	15.6 %
<b>What are MALE's main activities in your village?</b>														
1	Housekeeping	27.5 %	27.5 %	16.7 %	17.5 %	15.0 %	17.5 %	82.5 %	20.0 %	20.0 %	13.3 %	13.3 %	18.3 %	24.4 %
2	Cooking	7.5 %	5.0 %	6.7 %	10.0 %	7.5 %	2.5 %		6.0 %	5.0 %	3.3 %	3.3 %	5.0 %	5.2 %
3	Farming	95.0 %	100.0 %	93.3 %	95.0 %	95.0 %	100.0 %	100.0 %	92.0 %	97.5 %	86.7 %	96.7 %	96.7 %	95.8 %
4	Handy crafting	2.5 %			5.0 %				4.0 %	5.0 %	3.3 %		3.3 %	2.1 %
5	Care of children/ elders	7.5 %	17.5 %	16.7 %	7.5 %	5.0 %	5.0 %		14.0 %	5.0 %	10.0 %		10.0 %	8.3 %
6	Care of livestock	30.0 %	37.5 %	30.0 %	40.0 %	27.5 %	22.5 %	85.0 %	50.0 %	37.5 %	33.3 %	46.7 %	35.0 %	39.8 %
7	Making Palm sugar	7.5 %			2.5 %	5.0 %	5.0 %	5.0 %	12.0 %	12.5 %	13.3 %	16.7 %	33.3 %	10.4 %
8	Others	30.0 %	37.5 %	30.0 %	30.0 %	37.5 %	27.5 %	82.5 %	30.0 %	22.5 %	36.7 %	36.7 %	13.3 %	33.5 %
<b>3 Income source</b>														
<b>What are FEMALE's main cash income sources in your village? (plural answers)</b>														
1	Selling paddy	65.0 %	70.0 %	70.0 %	62.5 %	67.5 %	80.0 %	87.5 %	78.0 %	70.0 %	43.3 %	60.0 %	46.7 %	66.7 %
2	Working for other's field	72.5 %	70.0 %	90.0 %	80.0 %	87.5 %	72.5 %	95.0 %	80.0 %	77.5 %	53.3 %	40.0 %	53.3 %	72.7 %
3	Selling palm sugar	7.5 %			5.0 %	2.5 %	7.5 %	5.0 %	10.0 %	2.5 %		6.7 %	10.0 %	5.2 %
4	Selling handy craft									2.5 %	13.3 %	3.3 %	11.7 %	2.7 %
5	Working for weaving factory							5.0 %						0.4 %
6	Working for bricks factory				2.5 %					7.5 %		3.3 %	1.7 %	1.3 %
7	Selling straw mat								2.0 %		23.3 %	10.0 %	13.3 %	4.0 %
8	Selling cotton/ silk	2.5 %						2.5 %			3.3 %	10.0 %	1.7 %	1.5 %
9	Others	40.0 %	42.5 %	26.7 %	32.5 %	25.0 %	15.0 %	92.5 %	20.0 %	15.0 %	30.0 %	30.0 %	30.0 %	33.1 %
<b>What are MALE's main cash income sources in your village? (plural answers)</b>														
1	Selling paddy	62.5 %	57.5 %	66.7 %	50.0 %	57.5 %	62.5 %	82.5 %	64.0 %	62.5 %	43.3 %	53.3 %	35.0 %	57.5 %
2	Working for other's field	80.0 %	90.0 %	93.3 %	90.0 %	92.5 %	85.0 %	100.0 %	90.0 %	90.0 %	60.0 %	56.7 %	61.7 %	82.5 %
3	Selling palm sugar	10.0 %				2.5 %	7.5 %	7.5 %	14.0 %	2.5 %	6.7 %	23.3 %	30.0 %	9.6 %
4	Selling handy craft		2.5 %										3.3 %	0.6 %
5	Working for weaving factory									5.0 %				0.4 %
6	Working for bricks factory									7.5 %				0.6 %
7	Selling straw mat								2.0 %		3.3 %			0.4 %
8	Selling cotton/ silk		2.5 %											0.2 %
9	Others	40.0 %	35.0 %	36.7 %	40.0 %	27.5 %	22.5 %	90.0 %	22.0 %	17.5 %	40.0 %	46.7 %	38.3 %	37.5 %
<b>4 Discrimination</b>														
<b>Is there any social discrimination against women?</b>														
1	YES				5.0 %									0.4 %
2	NO	100.0 %	100.0 %	100.0 %	95.0 %	100.0 %	100.0 %	100.0 %	100.0 %	100.0 %	100.0 %	100.0 %	100.0 %	99.6 %
<b>Women's Access/ Control on resources</b>														
<b>Access</b>														
	Water source	100.0 %	100.0 %	100.0 %	97.5 %	100.0 %	100.0 %	100.0 %	100.0 %	100.0 %	73.3 %	96.7 %	100.0 %	97.9 %
	Land	100.0 %	100.0 %	100.0 %	97.5 %	100.0 %	100.0 %	100.0 %	100.0 %	100.0 %	86.7 %	80.0 %	100.0 %	97.7 %
	Farm land	100.0 %	100.0 %	100.0 %	97.5 %	100.0 %	100.0 %	100.0 %	100.0 %	100.0 %	83.3 %	70.0 %	100.0 %	96.9 %
	Livestock	100.0 %	100.0 %	100.0 %	97.5 %	100.0 %	100.0 %	100.0 %	100.0 %	100.0 %	100.0 %	86.7 %	100.0 %	99.0 %
<b>Control</b>														
	Water source	100.0 %	100.0 %	100.0 %	97.5 %	100.0 %	100.0 %	100.0 %	100.0 %	100.0 %	73.3 %	96.7 %	100.0 %	97.9 %
	Land	100.0 %	100.0 %	100.0 %	97.5 %	100.0 %	100.0 %	100.0 %	100.0 %	100.0 %	86.7 %	80.0 %	100.0 %	97.7 %
	Farm land	100.0 %	100.0 %	100.0 %	97.5 %	100.0 %	100.0 %	100.0 %	100.0 %	100.0 %	83.3 %	70.0 %	100.0 %	96.9 %
	Livestock	100.0 %	100.0 %	100.0 %	97.5 %	100.0 %	100.0 %	100.0 %	100.0 %	100.0 %	100.0 %	86.7 %	100.0 %	99.0 %

**Table B3.2-1 Result of Household Survey (4/15)**

Question	Irrigation System & No. of Samples	Battambang			Moung Russey			Pursat			Boribo			Whole
		Vat Balat	Thmal Pong	Baot Sala	Prek Chik	Proloy Po	Ream Kon	Wat Loung	B. P. Ponlay	Wat Chrea	Taram	Khvet	Lum Hach	
		40	40	30	40	40	40	40	50	40	30	30	60	
<b>SECTION III</b>	<b>INCOME AND EXPENDITURE</b>													
<b>III-1</b>	<b>Cash income sources</b>													
	0-10000			3.3 %							6.7 %		0.6 %	
	10001-100000										6.7 %	6.7 %	1.7 %	
	100001-300000								4.0 %		23.3 %	6.7 %	4.0 %	
	300001-600000			3.3 %	2.5 %		2.5 %	5.0 %		5.0 %	23.3 %	33.3 %	8.5 %	
	600001-1000000	5.0 %	5.0 %	6.7 %	2.5 %	5.0 %	2.5 %	5.0 %	6.0 %	12.5 %	3.3 %	10.0 %	7.1 %	
	1000001-3000000	27.5 %	30.0 %	23.3 %	35.0 %	27.5 %	27.5 %	60.0 %	56.0 %	57.5 %	26.7 %	36.7 %	37.3 %	
	> 3000000	67.5 %	65.0 %	63.3 %	60.0 %	67.5 %	67.5 %	30.0 %	34.0 %	25.0 %	10.0 %	6.7 %	40.8 %	
<b>II-2</b>	<b>Expenditure for consumption</b>													
	0-10000			3.3 %							3.3 %		0.4 %	
	10001-100000										13.3 %	6.7 %	2.3 %	
	100001-300000				2.5 %	2.5 %		2.5 %	2.0 %	2.5 %	30.0 %	16.7 %	8.3 %	
	300001-600000	2.5 %	2.5 %	3.3 %	5.0 %	2.5 %	2.5 %	10.0 %	8.0 %	10.0 %	26.7 %	40.0 %	11.3 %	
	600001-1000000	5.0 %	15.0 %	13.3 %	7.5 %	7.5 %	7.5 %	12.5 %	16.0 %	17.5 %	3.3 %	16.7 %	12.1 %	
	1000001-3000000	40.0 %	35.0 %	43.3 %	45.0 %	42.5 %	40.0 %	57.5 %	58.0 %	47.5 %	16.7 %	20.0 %	38.1 %	
	> 3000000	52.5 %	47.5 %	36.7 %	40.0 %	45.0 %	50.0 %	17.5 %	16.0 %	22.5 %	6.7 %	1.7 %	27.5 %	
<b>III-3</b>	<b>Investment on productive</b>													
<b>1</b>	<b>Livestock</b>													
	1-1 Chicken	52.5 %	55.0 %	70.0 %	77.5 %	62.5 %	55.0 %	92.5 %	88.0 %	70.0 %	76.7 %	86.7 %	74.2 %	
	1-2 Ducks		7.5 %	13.3 %	25.0 %	7.5 %	20.0 %	22.5 %	24.0 %	2.5 %	10.0 %	6.7 %	12.9 %	
	1-3 Cattle	57.5 %	60.0 %	70.0 %	75.0 %	42.5 %	45.0 %	52.5 %	54.0 %	47.5 %	36.7 %	70.0 %	52.5 %	
	1-4 Water buffalo	2.5 %			2.5 %	10.0 %		37.5 %	16.0 %	22.5 %	40.0 %	3.3 %	17.7 %	
	1-5 Pig	7.5 %	10.0 %	23.3 %	42.5 %	22.5 %	30.0 %	35.0 %	58.0 %	30.0 %	56.7 %	53.3 %	36.0 %	
	1-6 Horse													
	1-7 Goat													
	1-8 Others					2.5 %							0.2 %	
<b>SECTION IV</b>	<b>SAVINGS AND LOAN</b>													
<b>IV-1</b>	<b>Savings of any type at present</b>													
	1 YES		7.5 %	13.3 %	2.5 %	5.0 %	12.5 %	15.0 %	6.0 %			3.3 %	21.7 %	
	2 NO	100.0 %	92.5 %	86.7 %	97.5 %	95.0 %	87.5 %	85.0 %	94.0 %	100.0 %	100.0 %	96.7 %	78.3 %	
	<b>Source of savings</b>													
	1 Money in bank		2.5 %	3.3 %								3.3 %	1.7 %	
	2 Land						2.5 %	2.5 %					0.4 %	
	3 Livestock												1.7 %	
	4 Cash			3.3 %									3.3 %	
	5 Others		5.0 %	6.7 %	2.5 %	5.0 %	10.0 %	12.5 %	6.0 %				15.0 %	
	<b>Purpose for savings</b>													
	1 For safety		2.5 %		2.5 %		2.5 %						1.7 %	
	2 Saving for future expenditure		5.0 %	3.3 %		5.0 %	10.0 %					3.3 %	6.7 %	
	3 Saving for emergency needs			10.0 %						15.0 %	6.0 %		13.3 %	
	<b>Reason of no savings</b>													
	1 No idle money	75.0 %	85.0 %	83.3 %	87.5 %	80.0 %	82.5 %	72.5 %	86.0 %	92.5 %	90.0 %	90.0 %	61.7 %	
	2 Credit is available at anytime	2.5 %				5.0 %	2.5 %	2.5 %	4.0 %				1.5 %	
	3 Others	22.5 %	15.0 %	16.7 %	12.5 %	15.0 %	15.0 %	25.0 %	10.0 %	7.5 %	10.0 %	10.0 %	18.3 %	
<b>IV-2</b>	<b>Loans and debts at present</b>													
	1 YES	30.0 %	17.5 %	20.0 %	35.0 %	30.0 %	35.0 %	42.5 %	56.0 %	35.0 %	10.0 %	6.7 %	23.3 %	
	2 NO	70.0 %	82.5 %	80.0 %	65.0 %	70.0 %	65.0 %	57.5 %	44.0 %	65.0 %	90.0 %	93.3 %	76.7 %	
	<b>Source of loans/debts</b>													
	1 Money lender	2.5 %	2.5 %	6.7 %		5.0 %	5.0 %	12.5 %					5.0 %	
	2 Friend/Relatives	22.5 %	7.5 %	10.0 %	10.0 %	10.0 %	15.0 %	7.5 %	12.0 %	15.0 %	3.3 %	6.7 %	10.4 %	
	3 Trader	5.0 %	2.5 %			7.5 %	5.0 %						1.7 %	
	4 NGO		2.5 %	3.3 %	22.5 %	7.5 %		10.0 %	16.0 %	7.5 %	3.3 %		8.3 %	
	5 Commercial bank				2.5 %				4.0 %	2.5 %	3.3 %		1.7 %	
	6 Rice miller													
	7 Credit scheme/project		2.5 %		2.5 %		5.0 %		6.0 %	10.0 %			1.7 %	
	<b>Purpose for loans/debts</b>													
	1 Seeds/fertilizers/agro-chemicals	2.5 %	2.5 %		2.5 %	5.0 %	7.5 %	17.5 %	6.0 %	7.5 %			1.7 %	
	2 Farm equipment/tools	5.0 %	2.5 %	3.3 %	5.0 %	2.5 %	2.5 %	2.5 %	4.0 %		3.3 %		1.7 %	
	3 Animals					2.5 %			14.0 %	5.0 %			5.0 %	
	4 Food	5.0 %	2.5 %	3.3 %	2.5 %	2.5 %	7.5 %	10.0 %	6.0 %	10.0 %	3.3 %	3.3 %	6.7 %	
	5 Assets	5.0 %		3.3 %	2.5 %	5.0 %	2.5 %		12.0 %	2.5 %		3.3 %	3.1 %	
	6 Land		5.0 %		7.5 %				2.0 %	2.5 %			1.5 %	
	7 Children's education	2.5 %			2.5 %		2.5 %	5.0 %					1.7 %	
	8 Debt repayment	2.5 %							2.0 %	2.5 %			1.7 %	
	9 Ceremonial occasions								2.0 %				1.7 %	
	10 Business				5.0 %	2.5 %							0.6 %	
	11 Reclamation/Rehabilitation of farm land	2.5 %				5.0 %	2.5 %						0.8 %	
	12 Building/repair of house			3.3 %		2.5 %		7.5 %					1.0 %	
	13 Others	5.0 %	5.0 %	6.7 %	7.5 %	2.5 %	10.0 %		8.0 %	5.0 %	3.3 %	3.3 %	4.8 %	
	<b>Collateral for loans/debts</b>													
	1 Nothing	10.0 %	17.5 %	16.7 %	25.0 %	20.0 %	32.5 %	5.0 %	10.0 %	5.0 %	6.7 %	6.7 %	3.3 %	
	2 Land	10.0 %		3.3 %	10.0 %	10.0 %	2.5 %	2.5 %	22.0 %	7.5 %	3.3 %		1.7 %	
	3 Crop products													
	4 Jewelry/gold													
	5 Others	10.0 %						35.0 %	24.0 %	22.5 %			18.3 %	
<b>PART 2</b>	<b>AGRICULTURE</b>													
<b>SECTION I</b>	<b>LIVESTOCK AND FRUITS TREES</b>													
<b>I-1</b>	<b>Livestock</b>													
	1-1 Cows/ Oxen	65.0 %	77.5 %	86.7 %	82.5 %	55.0 %	42.5 %	57.5 %	54.0 %	57.5 %	46.7 %	76.7 %	59.8 %	
	1-2 Water buffalo					10.0 %		45.0 %	22.0 %	27.5 %	53.3 %	3.3 %	19.4 %	
	1-3 Goat/ Sheep									2.5 %			0.2 %	

## Table B3.2-1 Result of Household Survey (5/15)

Question	Irrigation System & No. of Samples	Battambang			Moung Russey			Pursat			Boribo			Whole
		Vat Balat	Thmat Pong	Beot Sala	Prek Chik	Proloy Po	Reem Kon	Wat Loung	B. P. Ponleij	Wat Chrea	Taram	Khvet	Lum Hach	
		40	40	30	40	40	40	40	50	40	30	30	60	
	1-4 Swine	7.5 %	10.0 %	16.7 %	27.5 %	20.0 %	15.0 %	20.0 %	46.0 %	7.5 %	36.7 %	33.3 %	36.7 %	23.8%
	1-5 Chicken	65.0 %	75.0 %	73.3 %	92.5 %	62.5 %	57.5 %	92.5 %	94.0 %	75.0 %	90.0 %	83.3 %	96.7 %	80.6%
	1-6 Duck	7.5 %	10.0 %	10.0 %	20.0 %	7.5 %	12.5 %	17.5 %	20.0 %		3.3 %	10.0 %	10.0 %	11.0%
	<b>Food sufficiency</b>													
1	Sufficient	47.5 %	62.5 %	70.0 %	57.5 %	42.5 %	35.0 %	55.0 %	46.0 %	32.5 %	40.0 %	73.3 %	53.3 %	50.6%
2	Just enough	12.5 %	15.0 %	16.7 %	20.0 %	17.5 %	7.5 %	17.5 %	18.0 %	20.0 %	23.3 %	6.7 %	10.0 %	15.2%
3	Short	10.0 %	7.5 %		5.0 %	7.5 %	2.5 %	2.5 %	8.0 %	17.5 %			8.3 %	6.3%
4	Very short	30.0 %	15.0 %	13.3 %										4.6%
	No Answer				17.5 %	32.5 %	55.0 %							16.3%
<b>I-2</b>	<b>FRUITS TREES</b>													
1	Sugar palm	25.0 %	45.0 %	16.7 %	37.5 %	45.0 %	40.0 %	65.0 %	56.0 %	80.0 %	73.3 %	60.0 %	56.7 %	50.4%
2	Banana	77.5 %	95.0 %	86.7 %	75.0 %	77.5 %	80.0 %	75.0 %	66.0 %	67.5 %	50.0 %	86.7 %	66.7 %	74.8%
3	Mango	80.0 %	97.5 %	73.3 %	87.5 %	70.0 %	80.0 %	67.5 %	74.0 %	67.5 %	53.3 %	70.0 %	70.0 %	74.6%
<b>SECTION II</b>	<b>LAND HOLDING</b>													
<b>II-2</b>	<b>Land holding status</b>													
1	Owner cultivator	70.0 %	87.5 %	83.3 %	90.0 %	72.5 %	85.0 %	97.5 %	96.0 %	92.5 %	96.7 %	100.0 %	100.0 %	89.6%
2	Owner cum sharecropper	12.5 %	5.0 %	6.7 %	2.5 %	5.0 %								2.5%
3	Sharecropper			3.3 %		2.5 %	5.0 %		2.0 %					1.0%
4	Owner cum tenant	12.5 %	7.5 %	3.3 %	5.0 %	10.0 %	10.0 %	2.5 %		7.5 %	3.3 %			5.0%
5	Tenant	5.0 %		3.3 %	2.5 %	5.0 %			2.0 %					1.5%
6	Not operating any farm land					5.0 %								0.4%
<b>SECTION III</b>	<b>CROPPED AREA &amp; PRODUCTION</b>													
<b>II-2</b>	<b>Cropping pattern</b>													
<b>III-3</b>	<b>Reason for fallow (Wet Season)</b>													
1	Labor shortage									2.5 %		10.0 %	5.0 %	1.5%
2	Working capital shortage												1.7 %	0.2%
3	Water shortage									5.0 %	3.3 %	6.7 %	11.7 %	2.5%
4	Flood/inundation													
	<b>Reason for fallow (Dry Season)</b>													
1	Labor shortage					7.5 %			2.0 %				1.7 %	1.0%
2	Working capital shortage					7.5 %			2.0 %	5.0 %				1.5%
3	Water shortage	95.0 %	100.0 %	70.0 %	100.0 %	85.0 %	52.5 %	97.5 %	96.0 %	67.5 %	96.7 %	100.0 %	55.0 %	83.3%
4	Flood/inundation													
<b>SECTION IV</b>	<b>FARMING PRACTICES</b>													
	<b>Seed source</b>													
1	Own products	67.5 %	67.5 %	80.0 %	80.0 %	72.5 %	67.5 %	75.0 %	72.0 %	77.5 %	83.3 %	83.3 %	81.7 %	75.4%
2	Exchange with others	17.5 %	17.5 %	13.3 %	12.5 %	12.5 %	10.0 %	15.0 %	8.0 %	17.5 %	6.7 %	13.3 %	10.0 %	12.7%
3	Procured at local market	10.0 %			5.0 %	5.0 %	2.5 %		2.0 %					2.1%
4	Certified seed purchased	5.0 %	10.0 %	6.7 %		7.5 %	10.0 %	5.0 %	10.0 %	2.5 %		3.3 %		5.0%
	<b>Seed replacement</b>													
1	once per 3 croppings	27.5 %	37.5 %	50.0 %	45.0 %	40.0 %	45.0 %	30.0 %	28.0 %	32.5 %	53.3 %	36.7 %	30.0 %	36.9%
2	once 4 - 6 croppings	12.5 %	2.5 %	6.7 %	2.5 %		2.5 %	10.0 %	6.0 %	5.0 %	3.3 %	3.3 %	5.0 %	5.0%
3	once > 6 croppings	32.5 %	15.0 %	10.0 %	15.0 %	15.0 %	15.0 %	30.0 %	66.0 %	27.5 %	30.0 %	20.0 %	30.0 %	26.9%
	Others	27.5 %	45.0 %	33.3 %	37.5 %	45.0 %	37.5 %	30.0 %		35.0 %	13.3 %	40.0 %	35.0 %	31.3%
	<b>Land preparation</b>													
1	Draft animal	32.5 %	42.5 %	60.0 %	62.5 %	27.5 %	25.0 %	75.0 %	94.0 %	77.5 %	86.7 %	90.0 %	95.0 %	65.0%
2	Machinery	62.5 %	52.5 %	30.0 %	27.5 %	62.5 %	75.0 %	20.0 %	2.0 %	15.0 %		3.3 %	5.0 %	29.2%
3	Manual	5.0 %	5.0 %	10.0 %	10.0 %	10.0 %		5.0 %	4.0 %	7.5 %	13.3 %	6.7 %		5.8%
<b>IV-2</b>	<b>Other crops</b>													
	<b>Seed source/upland crops</b>													
1	Own products	72.5 %	65.0 %	56.7 %	45.0 %	42.5 %	47.5 %	80.0 %	62.0 %	35.0 %	50.0 %	63.3 %	58.3 %	56.7%
2	Exchange with others	5.0 %	10.0 %	10.0 %	10.0 %	12.5 %	5.0 %	7.5 %	6.0 %	12.5 %	6.7 %	10.0 %	11.7 %	9.0%
3	Procured at local market	7.5 %	5.0 %	6.7 %	12.5 %	2.5 %		10.0 %		2.5 %			3.3 %	4.2%
4	Certified seed purchased	12.5 %	12.5 %	10.0 %	12.5 %	2.5 %	5.0 %	2.5 %	16.0 %	7.5 %		3.3 %	3.3 %	7.5%
	<b>Seed source/vegetables</b>													
1	Own products	70.0 %	55.0 %	50.0 %	50.0 %	52.5 %	47.5 %	50.0 %	60.0 %	37.5 %	50.0 %	53.3 %	61.7 %	53.8%
2	Exchange with others	5.0 %	10.0 %	6.7 %	15.0 %	5.0 %	5.0 %	2.5 %	10.0 %	7.5 %	10.0 %	10.0 %	13.3 %	8.5%
3	Procured at local market	12.5 %	5.0 %	3.3 %		2.5 %	2.5 %	5.0 %	2.0 %	5.0 %	10.0 %	6.7 %	8.3 %	5.2%
4	Certified seed purchased	10.0 %	17.5 %	23.3 %	10.0 %	5.0 %	2.5 %	7.5 %	20.0 %	12.5 %	3.3 %		3.3 %	9.6%
<b>SECTION V</b>	<b>PRODUCTION (Crop year 2005/2006)</b>													
<b>V-2</b>	<b>Livestock &amp; Fish</b>													
1	Cow	50.0 %	32.5 %	46.7 %	42.5 %	12.5 %	12.5 %	17.5 %	26.0 %	12.5 %	23.3 %	13.3 %	8.3 %	24.0%
2	Cattle			26.7 %					5.0 %	6.0 %	10.0 %		1.7 %	3.8%
3	Water Buffalo			26.7 %		5.0 %	2.5 %	7.5 %	2.0 %	7.5 %	13.3 %	3.3 %	5.0 %	5.6%
4	Swine/Pig	5.0 %	7.5 %	33.3 %	52.5 %	22.5 %	27.5 %	32.5 %	52.0 %	25.0 %	50.0 %	36.7 %	43.3 %	32.7%
5	Poultry	30.0 %	42.5 %	60.0 %	42.5 %	35.0 %	27.5 %	57.5 %	68.0 %	55.0 %	53.3 %	50.0 %	78.3 %	51.3%
6	Egg	2.5 %	2.5 %	26.7 %	10.0 %				2.0 %			3.3 %		3.3%
7	Fish	10.0 %	2.5 %	26.7 %	2.5 %	10.0 %	7.5 %	2.5 %	4.0 %	7.5 %	3.3 %		1.7 %	6.0%
<b>V-3</b>	<b>Food condition/ availability</b>													
1	<b>Rice</b>													
1	Own harvest/ product exceed the household demand	70.0 %	70.0 %	60.0 %	60.0 %	75.0 %	75.0 %	70.0 %	48.0 %	52.5 %	36.7 %	33.3 %	41.7 %	57.7%
1	Own harvest/ product is just enough to the household demand	15.0 %	12.5 %	23.3 %	7.5 %	12.5 %	7.5 %	10.0 %	18.0 %	20.0 %	30.0 %	23.3 %	35.0 %	18.1%
1	Purchased (or exchanged) to meet the household demand	5.0 %	10.0 %	3.3 %	10.0 %	5.0 %	7.5 %	17.5 %	18.0 %	5.0 %	3.3 %		8.3 %	8.3%
1	Insufficient	10.0 %	7.5 %	13.3 %	22.5 %	7.5 %	10.0 %	2.5 %	16.0 %	22.5 %	30.0 %	43.3 %	15.0 %	15.8%
2	<b>Other cereals</b>													
2	Own harvest/ product exceed the household demand	10.0 %	27.5 %	16.7 %	20.0 %	7.5 %	5.0 %	12.5 %	10.0 %	7.5 %	6.7 %	6.7 %	1.7 %	10.6%
2	Own harvest/ product is just enough to the household demand	10.0 %	10.0 %	13.3 %	15.0 %	15.0 %	15.0 %	5.0 %	12.0 %	10.0 %		6.7 %	11.7 %	10.6%

**Table B3.2-1 Result of Household Survey (6/15)**

Question	Irrigation System & No. of Samples	Battambang			Moung Russey			Pursat			Boribo			Whole 480
		Vat Balat	Thmet Pong	Beot Sala	Prek Chik	Proloy Po	Ream Kon	Wat Loung	B. P. Ponley	Wat Chrea	Teram	Khvet	Lum Hach	
		40	40	30	40	40	40	40	50	40	30	30	60	
2	Purchased (or exchanged) to meet the household demand	20.0 %	20.0 %	16.7 %	17.5 %	27.5 %	27.5 %	20.0 %	20.0 %	10.0 %	6.7 %	13.3 %	19.2 %	
2	Insufficient	80.0 %	80.0 %	83.3 %	82.5 %	72.5 %	72.5 %	80.0 %	80.0 %	90.0 %	93.3 %	86.7 %	80.8 %	
3	<b>Roots and tuber crops</b>													
3	Own harvest/ product exceed the household demand	5.0 %	7.5 %			2.5 %	7.5 %	10.0 %	6.0 %	5.0 %	3.3 %	13.3 %	5.4 %	
3	Own harvest/ product is just enough to the household demand	12.5 %	12.5 %	13.3 %	5.0 %	7.5 %	5.0 %	7.5 %	6.0 %	2.5 %	6.7 %	6.7 %	8.5 %	
3	Purchased (or exchanged) to meet the household demand	25.0 %	22.5 %	26.7 %	30.0 %	32.5 %	32.5 %	35.0 %	22.0 %	25.0 %	16.7 %	3.3 %	23.5 %	
3	Insufficient	75.0 %	77.5 %	73.3 %	70.0 %	67.5 %	67.5 %	65.0 %	78.0 %	75.0 %	83.3 %	86.7 %	76.5 %	
4	<b>Beans</b>													
4	Own harvest/ product exceed the household demand	7.5 %	12.5 %	6.7 %	7.5 %		7.5 %	2.5 %	10.0 %	5.0 %	3.3 %	10.0 %	6.3 %	
4	Own harvest/ product is just enough to the household demand	7.5 %	2.5 %	6.7 %	5.0 %	2.5 %		2.5 %	4.0 %	2.5 %	3.3 %	6.7 %	5.0 %	
4	Purchased (or exchanged) to meet the household demand	22.5 %	30.0 %	26.7 %	27.5 %	37.5 %	37.5 %	40.0 %	22.0 %	32.5 %	13.3 %	6.7 %	25.6 %	
4	Insufficient	77.5 %	70.0 %	73.3 %	72.5 %	62.5 %	62.5 %	60.0 %	78.0 %	67.5 %	86.7 %	93.3 %	74.4 %	
5	<b>Vegetables</b>													
5	Own harvest/product exceed the household demand	27.5 %	55.0 %	46.7 %	17.5 %	20.0 %	20.0 %	30.0 %	32.0 %	27.5 %	16.7 %	16.7 %	28.1 %	
5	Own harvest/product is just enough to the household demand	10.0 %	17.5 %	20.0 %	25.0 %	25.0 %	20.0 %	17.5 %	18.0 %	15.0 %	13.3 %	16.7 %	18.3 %	
5	Purchased (or exchanged) to meet the household demand	22.5 %	5.0 %	10.0 %	17.5 %	15.0 %	25.0 %	22.5 %	20.0 %	22.5 %	10.0 %	23.3 %	16.9 %	
5	Insufficient	77.5 %	95.0 %	90.0 %	82.5 %	85.0 %	75.0 %	77.5 %	80.0 %	77.5 %	90.0 %	76.7 %	83.1 %	
6	<b>Meat</b>													
6	Own harvest/ product exceed the	2.5 %	10.0 %		5.0 %	5.0 %	5.0 %	10.0 %	8.0 %	5.0 %	3.3 %	3.3 %	6.0 %	
6	Own harvest/ product is just enough to the	5.0 %	5.0 %	3.3 %	5.0 %	5.0 %	2.5 %	10.0 %	2.0 %	12.5 %	6.7 %	3.3 %	5.6 %	
6	Purchased (or exchanged) to meet the household demand	40.0 %	35.0 %	43.3 %	45.0 %	50.0 %	50.0 %	37.5 %	36.0 %	35.0 %	26.7 %	23.3 %	35.8 %	
6	Insufficient	60.0 %	65.0 %	56.7 %	55.0 %	50.0 %	50.0 %	62.5 %	64.0 %	65.0 %	73.3 %	76.7 %	64.2 %	
7	<b>Fish</b>													
7	Own harvest/ product exceed the household demand	5.0 %	5.0 %		2.5 %	12.5 %	12.5 %	7.5 %	6.0 %	7.5 %			5.4 %	
7	Own harvest/ product is just enough to the household demand	2.5 %	5.0 %	3.3 %	5.0 %			5.0 %	6.0 %	7.5 %	10.0 %	3.3 %	4.8 %	
7	Purchased (or exchanged) to meet the household demand	35.0 %	27.5 %	30.0 %	35.0 %	42.5 %	40.0 %	30.0 %	24.0 %	27.5 %	16.7 %	20.0 %	28.3 %	
7	Insufficient	65.0 %	72.5 %	70.0 %	65.0 %	57.5 %	60.0 %	70.0 %	76.0 %	72.5 %	83.3 %	80.0 %	71.7 %	
<b>SECTION VI POST-HARVEST, PROCESSING AND MARKETING</b>														
VI-1	<b>Post-harvest operation of rice</b>													
	<b>Method</b>													
	<b>Threshing</b>													
1	Engine thresher	95.0 %	90.0 %	80.0 %	72.5 %	100.0 %	95.0 %	70.0 %	62.0 %	82.5 %	3.3 %		66.7 %	
2	Pedal thresher	2.5 %	2.5 %	10.0 %	20.0 %		2.5 %	12.5 %	4.0 %	15.0 %			6.7 %	
3	Manual threshing	2.5 %	7.5 %	10.0 %	7.5 %		2.5 %	17.5 %	34.0 %	2.5 %	96.7 %	100.0 %	26.9 %	
	<b>Method</b>													
	<b>Drying</b>													
1	Dryer (machine)				2.5 %				2.0 %	2.5 %	90.0 %		1.7 %	
2	Sun drying	100.0 %	100.0 %	100.0 %	97.5 %	100.0 %	100.0 %	100.0 %	98.0 %	97.5 %	10.0 %	100.0 %	93.5 %	
	<b>Method</b>													
	<b>Cleaning</b>													
1	Engine winnower	32.5 %	42.5 %	36.7 %	27.5 %	42.5 %	35.0 %	35.0 %	28.0 %	40.0 %		13.3 %	28.8 %	
2	Manual winnower	62.5 %		6.7 %	7.5 %	2.5 %		2.5 %	4.0 %	7.5 %	13.3 %	6.7 %	9.8 %	
3	Manual without winnower	5.0 %	57.5 %	56.7 %	65.0 %	55.0 %	65.0 %	62.5 %	68.0 %	52.5 %	86.7 %	80.0 %	61.5 %	
VI-2	<b>Storage and post-harvest losses of rice</b>													
	<b>Paddy</b>													
1	Bag	40.0 %	32.5 %	36.7 %	35.0 %	22.5 %	25.0 %	22.5 %	32.0 %	30.0 %	10.0 %	20.0 %	31.5 %	
2	Bamboo basket	20.0 %	12.5 %	6.7 %	7.5 %	15.0 %	12.5 %	30.0 %	22.0 %	20.0 %	33.3 %	33.3 %	18.1 %	
3	Wooden box	37.5 %	45.0 %	50.0 %	57.5 %	62.5 %	62.5 %	42.5 %	42.0 %	47.5 %	53.3 %	46.7 %	47.1 %	
4	Others	2.5 %	10.0 %	6.7 %				5.0 %	4.0 %	2.5 %	3.3 %		3.3 %	
	<b>Rice</b>													
1	Bag	95.0 %	95.0 %	100.0 %	95.0 %	97.5 %	100.0 %	95.0 %	92.0 %	100.0 %	93.3 %	93.3 %	96.7 %	
2	Bamboo basket	2.5 %			2.5 %								0.4 %	
3	Wooden box					2.5 %							0.2 %	
4	Others	2.5 %	5.0 %		2.5 %			5.0 %	8.0 %		6.7 %	6.7 %	3.3 %	
	<b>Use of fumigant</b>													
1	Yes							2.0 %					0.2 %	
2	No	100.0 %	100.0 %	100.0 %	100.0 %	100.0 %	100.0 %	100.0 %	98.0 %	100.0 %	100.0 %	100.0 %	99.8 %	
	<b>Maximum storage period</b>													
	0-12 months	92.5 %	80.0 %	90.0 %	82.5 %	90.0 %	87.5 %	65.0 %	64.0 %	65.0 %	73.3 %	66.7 %	75.8 %	
	0-6 months	7.5 %	20.0 %	10.0 %	17.5 %	10.0 %	12.5 %	35.0 %	36.0 %	35.0 %	26.7 %	33.3 %	24.2 %	
VI-3	<b>Post-harvest losses of rice</b>													
	<b>Most dominant loss</b>													
1	During harvesting	22.5 %	32.5 %	40.0 %	30.0 %	40.0 %	25.0 %	30.0 %	26.0 %	32.5 %	46.7 %	46.7 %	32.7 %	
2	At threshing	65.0 %	60.0 %	50.0 %	57.5 %	55.0 %	62.5 %	60.0 %	62.0 %	52.5 %	26.7 %	43.3 %	55.0 %	
3	At drying	5.0 %		6.7 %	7.5 %		7.5 %		6.0 %	5.0 %	6.7 %		3.8 %	
4	At Cleaning				2.5 %		2.5 %			2.5 %	10.0 %	10.0 %	3.3 %	
5	At storage	2.5 %	7.5 %	3.3 %	2.5 %	5.0 %	2.5 %	5.0 %	2.0 %	7.5 %	3.3 %		3.5 %	

**Table B3.2-1 Result of Household Survey (7/15)**

Question	Irrigation System & No. of Samples	Battambang			Moung Russey			Pursat			Boribo			Whole
		Vat Batat	Thmat Pong	Baot Sala	Prek Chik	Proloy Po	Ream Kon	Wat Loung	B. P. Ponley	Wat Chrea	Tarem	Khvet	Lum Hach	
		40	40	30	40	40	40	40	50	40	30	30	60	
<b>2nd dominant losses</b>														
1	During harvesting	20.0 %	25.0 %	20.0 %	35.0 %	27.5 %	32.5 %	20.0 %	30.0 %	25.0 %	13.3 %	20.0 %	26.7 %	25.2 %
2	At threshing	25.0 %	25.0 %	40.0 %	27.5 %	35.0 %	22.5 %	25.0 %	20.0 %	22.5 %	50.0 %	43.3 %	18.3 %	27.9 %
3	At drying	17.5 %	17.5 %	13.3 %	10.0 %	10.0 %	10.0 %	15.0 %	14.0 %	12.5 %	13.3 %	10.0 %	15.0 %	13.3 %
4	At Cleaning	5.0 %	5.0 %		5.0 %	7.5 %	2.5 %	17.5 %	12.0 %	10.0 %	20.0 %	20.0 %	18.3 %	10.4 %
5	At storage	30.0 %	22.5 %	26.7 %	22.5 %	20.0 %	30.0 %	17.5 %	18.0 %	27.5 %	3.3 %	3.3 %	18.3 %	20.4 %
<b>Total losses</b>														
<b>VI-4 Marketing of rice</b>														
<b>Sold product</b>														
1	Field dried paddy	30.0 %	25.0 %	36.7 %	35.0 %	20.0 %	35.0 %	27.5 %	16.0 %	17.5 %	3.3 %	6.7 %	8.3 %	21.5 %
2	Sun dried paddy	40.0 %	32.5 %	20.0 %	25.0 %	47.5 %	42.5 %	35.0 %	32.0 %	40.0 %	40.0 %	30.0 %	13.3 %	32.5 %
3	Milled rice	10.0 %	5.0 %	6.7 %		5.0 %	5.0 %	2.5 %	2.0 %	5.0 %	3.3 %			3.5 %
	No Answer	20.0 %	37.5 %	36.7 %	40.0 %	27.5 %	17.5 %	35.0 %	50.0 %	37.5 %	53.3 %	63.3 %	78.3 %	42.5 %
<b>Destination</b>														
1	Rice miller in village	30.0 %	17.5 %	23.3 %	25.0 %	7.5 %	42.5 %	10.0 %	16.0 %	25.0 %	16.7 %	23.3 %	11.7 %	20.2 %
2	Rice miller in commune center	15.0 %	17.5 %	20.0 %	15.0 %	15.0 %	5.0 %	20.0 %	16.0 %	15.0 %	6.7 %	3.3 %	1.7 %	12.3 %
3	Rice miller in district center	10.0 %	10.0 %	3.3 %	7.5 %	7.5 %	12.5 %	7.5 %	4.0 %	2.5 %	13.3 %			6.3 %
4	Collector/middleman	45.0 %	42.5 %	33.3 %	32.5 %	62.5 %	40.0 %	15.0 %	8.0 %	17.5 %	3.3 %	3.3 %	10.0 %	25.8 %
5	Local market		10.0 %	6.7 %	5.0 %			2.5 %	2.0 %		6.7 %			2.5 %
<b>VI-5 Marketing of other products</b>														
<b>Vegetable</b>														
1	Market in village	80.0 %	75.0 %	83.3 %	82.5 %	77.5 %	82.5 %	77.5 %	84.0 %	77.5 %	36.7 %	60.0 %	71.7 %	75.0 %
2	Market in commune center	10.0 %	7.5 %	3.3 %	5.0 %	7.5 %	7.5 %		8.0 %	15.0 %				5.4 %
3	Market in district center	2.5 %	7.5 %		5.0 %	2.5 %					3.3 %	3.3 %	6.7 %	2.7 %
4	Collector/middleman		5.0 %	3.3 %	2.5 %				2.0 %		10.0 %	10.0 %	1.7 %	2.5 %
<b>Field Crops</b>														
1	Market in village	50.0 %	57.5 %	46.7 %	45.0 %	47.5 %	45.0 %	42.5 %	40.0 %	50.0 %	13.3 %	36.7 %	55.0 %	45.2 %
2	Market in commune center	12.5 %	10.0 %	6.7 %	15.0 %	5.0 %	20.0 %	10.0 %	20.0 %	17.5 %		16.7 %	11.7 %	12.5 %
3	Market in district center	17.5 %	10.0 %	10.0 %	12.5 %	12.5 %	15.0 %	7.5 %	8.0 %	7.5 %	13.3 %	10.0 %	8.3 %	10.8 %
4	Collector/middleman	10.0 %	12.5 %	20.0 %	17.5 %	25.0 %	17.5 %	25.0 %	16.0 %	20.0 %	23.3 %	3.3 %	5.0 %	15.8 %
<b>Vegetables</b>														
1	Market in village	70.0 %	60.0 %	70.0 %	70.0 %	72.5 %	55.0 %	62.5 %	70.0 %	62.5 %	20.0 %	53.3 %	68.3 %	62.5 %
2	Market in commune center	15.0 %	7.5 %	6.7 %	10.0 %	7.5 %	15.0 %	10.0 %	10.0 %	22.5 %			1.7 %	9.0 %
3	Market in district center	2.5 %	15.0 %	3.3 %	7.5 %	5.0 %	17.5 %	7.5 %	8.0 %	10.0 %	10.0 %	6.7 %	8.3 %	8.5 %
4	Collector/middleman		5.0 %	3.3 %	2.5 %		2.5 %		4.0 %	2.5 %	6.7 %	6.7 %		2.5 %
<b>Livestock</b>														
1	Market in village	62.5 %	47.5 %	53.3 %	50.0 %	52.5 %	50.0 %	57.5 %	52.0 %	47.5 %	16.7 %	46.7 %	35.0 %	47.7 %
2	Market in commune center	5.0 %	7.5 %	3.3 %	5.0 %	5.0 %	12.5 %		4.0 %	17.5 %			3.3 %	5.4 %
3	Market in district center	5.0 %	2.5 %	3.3 %	2.5 %	5.0 %	10.0 %	5.0 %			3.3 %	3.3 %	6.7 %	4.0 %
4	Collector/middleman	20.0 %	17.5 %	26.7 %	35.0 %	30.0 %	15.0 %	30.0 %	36.0 %	25.0 %	43.3 %	36.7 %	53.3 %	31.5 %
<b>Fish</b>														
1	Market in village	57.5 %	45.0 %	50.0 %	57.5 %	65.0 %	55.0 %	52.5 %	58.0 %	47.5 %	13.3 %	46.7 %	35.0 %	49.0 %
2	Market in commune center	7.5 %	2.5 %		5.0 %	5.0 %	10.0 %	7.5 %	6.0 %	7.5 %			3.3 %	4.8 %
3	Market in district center	7.5 %	12.5 %	6.7 %	7.5 %	7.5 %	7.5 %	5.0 %	8.0 %	10.0 %		6.7 %	6.7 %	7.3 %
4	Collector/middleman				2.5 %		7.5 %		4.0 %				8.3 %	2.3 %
<b>SECTION VII AGRICULTURAL SUPPORT SERVICES</b>														
<b>VII-1 Extension services</b>														
<b>Visit of extension worker</b>														
1	once per < 2 weeks	7.5 %	2.5 %	3.3 %	10.0 %	7.5 %	5.0 %	2.5 %	10.0 %	2.5 %	10.0 %	13.3 %		5.8 %
2	once per 2 weeks-1 month	5.0 %	15.0 %	6.7 %	2.5 %	10.0 %	17.5 %	22.5 %	30.0 %	25.0 %	13.3 %	20.0 %	20.0 %	16.3 %
3	Seldom visited	87.5 %	82.5 %	90.0 %	87.5 %	82.5 %	77.5 %	75.0 %	60.0 %	72.5 %	76.7 %	66.7 %	80.0 %	77.9 %
<b>Technical capability of extension workers</b>														
1	Sufficient	45.0 %	27.5 %	40.0 %	47.5 %	42.5 %	45.0 %	50.0 %	54.0 %	42.5 %	43.3 %	50.0 %	53.3 %	45.8 %
2	Not sufficient	20.0 %	37.5 %	13.3 %	12.5 %	20.0 %	25.0 %	40.0 %	40.0 %	32.5 %	46.7 %	46.7 %	30.0 %	30.2 %
3	No services provided	35.0 %	35.0 %	46.7 %	40.0 %	37.5 %	30.0 %	10.0 %	6.0 %	25.0 %	10.0 %	3.3 %	16.7 %	24.2 %
<b>Are you satisfied with current extension services</b>														
1	Sufficient	60.0 %	60.0 %	40.0 %	55.0 %	52.5 %	62.5 %	87.5 %	86.0 %	62.5 %	86.7 %	96.7 %	80.0 %	69.8 %
2	Not sufficient	2.5 %	7.5 %	6.7 %	7.5 %	7.5 %	7.5 %	5.0 %	6.0 %	17.5 %	3.3 %	3.3 %	8.3 %	7.1 %
3	No services provided	37.5 %	32.5 %	53.3 %	37.5 %	40.0 %	30.0 %	7.5 %	8.0 %	20.0 %	10.0 %		11.7 %	23.3 %
<b>VII-2 Rice seed supply</b>														
<b>Procurement of wanted seeds</b>														
1	Easy	87.5 %	82.5 %	83.3 %	52.5 %	62.5 %	72.5 %	75.0 %	78.0 %	62.5 %	93.3 %	70.0 %	78.3 %	74.6 %
2	Difficult	5.0 %	10.0 %	10.0 %	40.0 %	30.0 %	20.0 %	17.5 %	16.0 %	25.0 %	3.3 %	26.7 %	13.3 %	18.1 %
3	Not possible	7.5 %	7.5 %	6.7 %	7.5 %	7.5 %	7.5 %	7.5 %	6.0 %	12.5 %	3.3 %	3.3 %	8.3 %	7.3 %
<b>Procurement of certified/quality seeds</b>														
1	Easy	67.5 %	72.5 %	70.0 %	37.5 %	57.5 %	60.0 %	50.0 %	60.0 %	50.0 %	56.7 %	50.0 %	50.0 %	56.5 %
2	Difficult	25.0 %	20.0 %	23.3 %	47.5 %	32.5 %	32.5 %	40.0 %	32.0 %	32.5 %	23.3 %	33.3 %	38.3 %	32.3 %
3	Not possible	7.5 %	7.5 %	6.7 %	15.0 %	10.0 %	7.5 %	10.0 %	8.0 %	17.5 %	20.0 %	16.7 %	11.7 %	11.3 %
<b>Seed supply timing</b>														
1	In time	72.5 %	75.0 %	76.7 %	45.0 %	62.5 %	70.0 %	60.0 %	58.0 %	62.5 %	73.3 %	63.3 %	76.7 %	66.3 %
2	Delayed	12.5 %	12.5 %	10.0 %	35.0 %	22.5 %	10.0 %	22.5 %	24.0 %	20.0 %	23.3 %	13.3 %	10.0 %	17.9 %
3	Not obtained	15.0 %	12.5 %	13.3 %	20.0 %	15.0 %	20.0 %	17.5 %	18.0 %	17.5 %	3.3 %	23.3 %	13.3 %	15.8 %
<b>Quality seed prices</b>														
1	Too expensive	35.0 %	20.0 %	23.3 %	27.5 %	30.0 %	15.0 %	25.0 %	38.0 %	22.5 %	13.3 %	6.7 %	16.7 %	23.3 %
2	Acceptable	7.5 %	20.0 %	13.3 %	7.5 %	22.5 %	30.0 %	12.5 %	12.0 %	7.5 %	43.3 %	40.0 %	13.3 %	17.9 %
3	Not purchased	57.5 %	60.0 %	63.3 %	65.0 %	47.5 %	55.0 %	62.5 %	50.0 %	70.0 %	43.3 %	53.3 %	70.0 %	58.8 %
<b>VII-3 Farm inputs supply</b>														
<b>Procurement of wanted fertilizer</b>														
1	Easy	85.0 %	90.0 %	80.0 %	57.5 %	82.5 %	95.0 %	82.5 %	68.0 %	70.0 %	60.0 %	56.7 %	65.0 %	74.4 %
2	Difficult		5.0 %	10.0 %	22.5 %	10.0 %		10.0 %	14.0 %	17.5 %	13.3 %	23.3 %	23.3 %	12.7 %
3	Not possible	15.0 %	5.0 %	10.0 %	20.0 %	7.5 %	5.0 %	7.5 %	18.0 %	12.5 %	26.7 %	20.0 %	11.7 %	12.9 %
<b>Fertilizer supply timing</b>														

**Table B3.2-1 Result of Household Survey (8/15)**

Question	Irrigation System & No. of Samples	Battambang			Moung Russey			Pursat			Boribo			Whole
		Val Balat	Thmat Pong	Beot Sala	Prek Chik	Prolay Po	Ream Kon	Wat Loung	B. P. Posley	Wat Chrea	Taram	Khvet	Lum Hach	
		40	40	30	40	40	40	40	50	40	30	30	60	
1	In time	77.5 %	87.5 %	80.0 %	50.0 %	80.0 %	92.5 %	80.0 %	62.0 %	70.0 %	56.7 %	43.3 %	68.3 %	71.0 %
2	Delayed	10.0 %	7.5 %	10.0 %	27.5 %	12.5 %	2.5 %	12.5 %	14.0 %	17.5 %	16.7 %	23.3 %	16.7 %	14.2 %
3	Not obtained	12.5 %	5.0 %	10.0 %	22.5 %	7.5 %	5.0 %	7.5 %	24.0 %	12.5 %	26.7 %	33.3 %	15.0 %	14.8 %
	<b>Fertilizer prices</b>													
1	Too expensive	70.0 %	77.5 %	73.3 %	37.5 %	65.0 %	70.0 %	62.5 %	42.0 %	67.5 %	16.7 %	26.7 %	50.0 %	55.4 %
2	Acceptable	10.0 %	12.5 %	10.0 %	12.5 %	20.0 %	20.0 %	17.5 %	4.0 %	15.0 %	10.0 %	3.3 %	11.7 %	12.3 %
3	Not purchased	20.0 %	10.0 %	16.7 %	50.0 %	15.0 %	10.0 %	20.0 %	54.0 %	17.5 %	73.3 %	70.0 %	38.3 %	32.3 %
VII-4	<b>Farm credit scheme by bank, project &amp; NGO</b>													
	<b>Access to farm credit scheme</b>													
1	Easy	20.0 %	27.5 %	30.0 %	40.0 %	35.0 %	37.5 %	35.0 %	36.0 %	27.5 %	20.0 %	13.3 %	26.7 %	29.6 %
2	Difficult	17.5 %	15.0 %	6.7 %	7.5 %	5.0 %	5.0 %	17.5 %	16.0 %	15.0 %	10.0 %	23.3 %	15.0 %	12.9 %
3	Not possible	62.5 %	57.5 %	63.3 %	52.5 %	60.0 %	57.5 %	47.5 %	48.0 %	57.5 %	70.0 %	63.3 %	58.3 %	57.5 %
	<b>Timing of provision</b>													
1	In time	20.0 %	20.0 %	23.3 %	32.5 %	27.5 %	35.0 %	32.5 %	30.0 %	25.0 %	20.0 %	13.3 %	30.0 %	26.5 %
2	Delayed	15.0 %	17.5 %	10.0 %	12.5 %	12.5 %	5.0 %	22.5 %	20.0 %	17.5 %	6.7 %	20.0 %	13.3 %	14.6 %
3	Not obtained	65.0 %	62.5 %	66.7 %	55.0 %	60.0 %	60.0 %	45.0 %	50.0 %	57.5 %	73.3 %	66.7 %	56.7 %	59.0 %
	<b>Amount of credit</b>													
1	Sufficient	15.0 %	20.0 %	20.0 %	27.5 %	30.0 %	35.0 %	25.0 %	28.0 %	17.5 %	13.3 %	13.3 %	20.0 %	22.5 %
2	Not sufficient	15.0 %	17.5 %	13.3 %	20.0 %	12.5 %	7.5 %	27.5 %	22.0 %	20.0 %	10.0 %	16.7 %	20.0 %	17.3 %
3	Not provided	27.5 %	25.0 %	26.7 %	15.0 %	22.5 %	22.5 %	47.5 %	50.0 %	62.5 %	76.7 %	26.7 %	60.0 %	39.4 %
	No Answer	42.5 %	37.5 %	40.0 %	37.5 %	35.0 %	35.0 %					43.3 %		20.8 %
	<b>Procedures for credit application</b>													
1	Easy	7.5 %	7.5 %	6.7 %	15.0 %	17.5 %	7.5 %	17.5 %	12.0 %	10.0 %	10.0 %	13.3 %	15.0 %	11.9 %
2	Difficult	20.0 %	27.5 %	26.7 %	27.5 %	20.0 %	30.0 %	35.0 %	40.0 %	25.0 %	16.7 %	16.7 %	21.7 %	26.0 %
3	Not possible	72.5 %	65.0 %	66.7 %	57.5 %	62.5 %	62.5 %	47.5 %	48.0 %	65.0 %	73.3 %	70.0 %	63.3 %	62.1 %
SECTION VIII	<b>FARMING CONSTRAINTS AND IMPROVEMENT</b>													
VIII-1	<b>Farming constraints</b>													
	<b>Most serious</b>													
1	Low yield of crops (paddy)	40.0 %	35.0 %	33.3 %	25.0 %	37.5 %	35.0 %	30.0 %	24.0 %	40.0 %	10.0 %	26.7 %	46.7 %	32.9 %
2	Crop losses due to pest & disease	5.0 %	5.0 %	16.7 %	10.0 %	5.0 %	7.5 %	10.0 %	12.0 %	7.5 %	6.7 %	10.0 %	13.3 %	9.2 %
3	Weed problem	10.0 %	7.5 %	6.7 %	10.0 %	7.5 %	12.5 %	10.0 %	6.0 %	6.0 %		6.7 %	6.3 %	6.3 %
4	Crop losses due to wild animal	5.0 %	17.5 %	3.3 %	7.5 %	2.5 %	12.5 %		6.0 %	2.5 %	20.0 %	10.0 %	3.3 %	7.1 %
5	Difficulty for hiring draft animal/machinery	5.0 %	2.5 %			2.5 %	5.0 %	7.5 %	4.0 %			6.7 %	1.7 %	2.9 %
6	Labor shortage	2.5 %	2.5 %	10.0 %	2.5 %	2.5 %		2.5 %	4.0 %	7.5 %	10.0 %	6.7 %	6.7 %	4.6 %
7	Insufficient extension services		7.5 %	10.0 %	5.0 %	5.0 %	7.5 %	2.5 %	2.0 %					3.1 %
8	Shortage of farming capital	2.5 %	2.5 %	6.7 %	5.0 %	2.5 %		2.5 %	4.0 %	5.0 %	13.3 %		3.3 %	3.8 %
9	Difficulty for obtaining quality seeds	5.0 %		6.7 %	2.5 %		7.5 %	5.0 %	6.0 %	7.5 %		3.3 %	1.7 %	3.8 %
10	Difficulty for purchasing fertilizers		5.0 %	3.3 %	2.5 %			10.0 %	4.0 %	10.0 %				2.9 %
11	Expensive farm inputs		2.5 %			10.0 %	2.5 %							1.3 %
12	Poor soil conditions	5.0 %			5.0 %	5.0 %		7.5 %	8.0 %	7.5 %	3.3 %	6.7 %	13.3 %	5.6 %
13	Marketing problems of products				2.5 %									0.2 %
14	Lack of farm credit													
	<b>2nd serious</b>													
1	Low yield of crops (paddy)	2.5 %	5.0 %	6.7 %	10.0 %	10.0 %	7.5 %	17.5 %	8.0 %	2.5 %	10.0 %	3.3 %	10.0 %	7.9 %
2	Crop losses due to pest & disease	20.0 %	12.5 %	6.7 %	12.5 %	7.5 %	10.0 %	5.0 %	12.0 %	10.0 %	3.3 %	10.0 %	6.7 %	9.8 %
3	Weed problem	2.5 %	15.0 %	13.3 %	10.0 %	15.0 %	2.5 %	2.5 %	8.0 %	2.5 %	13.3 %	20.0 %	13.3 %	9.6 %
4	Crop losses due to wild animal	7.5 %	2.5 %		5.0 %	12.5 %	7.5 %	7.5 %	6.0 %	2.5 %	3.3 %	16.7 %	1.7 %	5.8 %
5	Difficulty for hiring draft animal/machinery	2.5 %	2.5 %		5.0 %	5.0 %	2.5 %	2.5 %	4.0 %	7.5 %		6.7 %	5.0 %	3.8 %
6	Labor shortage	7.5 %	2.5 %	3.3 %	2.5 %	7.5 %	10.0 %	7.5 %	14.0 %	10.0 %	16.7 %	13.3 %	16.7 %	9.6 %
7	Insufficient extension services	10.0 %		3.3 %	10.0 %	7.5 %	12.5 %	5.0 %	4.0 %	7.5 %		6.7 %	16.7 %	7.5 %
8	Shortage of farming capital	5.0 %	7.5 %	6.7 %	2.5 %	2.5 %	5.0 %	5.0 %	2.0 %	7.5 %		6.7 %	10.0 %	5.0 %
9	Difficulty for obtaining quality seeds	10.0 %	12.5 %	10.0 %	10.0 %	12.5 %	5.0 %	7.5 %	4.0 %	7.5 %	3.3 %		6.7 %	7.5 %
10	Difficulty for purchasing fertilizers	2.5 %	5.0 %	10.0 %	2.5 %	2.5 %	5.0 %	7.5 %	6.0 %	7.5 %				4.0 %
11	Expensive farm inputs	2.5 %	7.5 %				2.5 %	2.5 %		2.5 %	3.3 %			1.7 %
12	Poor soil conditions	5.0 %	5.0 %	20.0 %	2.5 %		2.5 %	15.0 %	22.0 %	17.5 %	16.7 %	6.7 %	13.3 %	10.6 %
13	Marketing problems of products					2.5 %	2.5 %			2.5 %				0.6 %
14	Lack of farm credit	2.5 %				2.5 %		5.0 %						0.8 %
	<b>3rd serious</b>													
1	Low yield of crops (paddy)	10.0 %	2.5 %	3.3 %	5.0 %	5.0 %	12.5 %		8.0 %	5.0 %	3.3 %	3.3 %		4.8 %
2	Crop losses due to pest & disease	2.5 %	12.5 %	6.7 %	2.5 %	7.5 %	7.5 %	2.5 %	6.0 %		6.7 %	6.7 %	1.7 %	5.0 %
3	Weed problem	10.0 %		6.7 %	5.0 %	7.5 %	7.5 %	12.5 %	2.0 %	2.5 %	6.7 %		8.3 %	5.8 %
4	Crop losses due to wild animal	5.0 %	2.5 %	3.3 %	2.5 %	2.5 %		7.5 %	2.0 %		3.3 %	10.0 %	10.0 %	4.2 %
5	Difficulty for hiring draft animal/machinery	5.0 %			2.5 %			2.5 %		10.0 %			3.3 %	2.1 %
6	Labor shortage	15.0 %	2.5 %	6.7 %	2.5 %	5.0 %	7.5 %		8.0 %	5.0 %	10.0 %	13.3 %	1.7 %	6.0 %
7	Insufficient extension services	5.0 %	2.5 %	10.0 %	10.0 %	7.5 %	7.5 %	7.5 %	12.0 %	10.0 %	6.7 %		8.3 %	7.5 %
8	Shortage of farming capital	5.0 %		3.3 %	5.0 %	2.5 %		2.5 %	10.0 %	2.5 %	16.7 %	13.3 %	3.3 %	5.0 %
9	Difficulty for obtaining quality seeds	2.5 %	7.5 %		7.5 %	15.0 %	5.0 %	5.0 %	12.0 %	7.5 %	3.3 %	6.7 %	11.7 %	7.5 %
10	Difficulty for purchasing fertilizers	2.5 %	2.5 %	6.7 %	2.5 %	5.0 %		15.0 %	6.0 %		6.7 %		5.0 %	4.4 %
11	Expensive farm inputs	2.5 %	2.5 %	6.7 %	2.5 %	2.5 %	2.5 %	7.5 %	4.0 %	2.5 %			15.0 %	4.4 %
12	Poor soil conditions	2.5 %	20.0 %	6.7 %	5.0 %	2.5 %	15.0 %	2.5 %	2.0 %	15.0 %	6.7 %	26.7 %		7.9 %
13	Marketing problems of products		2.5 %					7.5 %		2.5 %	3.3 %		13.3 %	2.9 %
14	Lack of farm credit				10.0 %				2.0 %	2.5 %		3.3 %		1.5 %
	<b>4th serious</b>													
1	Low yield of crops (paddy)	5.0 %	2.5 %	10.0 %	5.0 %		10.0 %	7.5 %	10.0 %	2.5 %	6.7 %	6.7 %	10.0 %	6.5 %
2	Crop losses due to pest & disease	2.5 %	2.5 %	3.3 %	2.5 %	5.0 %			2.0 %	2.5 %	3.3 %		1.7 %	2.1 %
3	Weed problem	2.5 %			5.0 %	2.5 %	2.5 %	5.0 %	10.0 %	2.5 %	3.3 %	10.0 %		3.5 %
4	Crop losses due to wild animal			3.3 %		2.5 %		2.5 %			3.3 %	6.7 %		1.3 %
5	Difficulty for hiring draft animal/machinery			3.3 %			2.5 %		2.0 %				3.3 %	1.0 %



**Table B3.2-1 Result of Household Survey (9/15)**

Question	Irrigation System & No. of Samples		Battambang			Moung Russey			Pursat			Boribo			Whole
	Vat Bala	Thmat Pong	Baot Sala	Prek Chik	Proloy Po	Ream Kon	Wat Loung	B. P. Ponley	Wat Chrea	Taram	Khvet	Lum Hach	480		
	40	40	30	40	40	40	40	50	40	30	30	60	480		
6 Labor shortage		5.0%	3.3%				5.0%	6.0%	5.0%	3.3%	6.7%	8.3%	3.8%		
7 Insufficient extension services	2.5%	10.0%	3.3%	5.0%			5.0%	2.0%	10.0%	16.7%	3.3%	1.7%	4.6%		
8 Shortage of farming capital	7.5%	2.5%		10.0%	5.0%	5.0%	5.0%		5.0%			11.7%	4.8%		
9 Difficulty for obtaining quality seeds	7.5%		6.7%	7.5%	5.0%			2.0%	5.0%	3.3%		3.3%	3.3%		
10 Difficulty for purchasing fertilizers		12.5%	6.7%	5.0%	2.5%	7.5%	2.5%	2.0%	5.0%	6.7%		3.3%	4.4%		
11 Expensive farm inputs	7.5%				2.5%	2.5%	2.5%						1.3%		
12 Poor soil conditions	10.0%	2.5%	3.3%	7.5%	15.0%	10.0%	7.5%	8.0%		10.0%	10.0%	13.3%	8.3%		
13 Marketing problems of products					2.5%		2.5%		2.5%				0.8%		
14 Lack of farm credit	5.0%					5.0%							0.8%		
<b>VIII-2 Farming constraints (physical)</b>															
<b>Most serious constraints</b>															
1 Irrigation water shortage in wet season	77.5%	82.5%	80.0%	82.5%	70.0%	75.0%	77.5%	88.0%	90.0%	73.3%	80.0%	78.3%	79.8%		
2 Irrigation water shortage in dry season	10.0%	5.0%	6.7%	5.0%	10.0%	7.5%	10.0%	2.0%		10.0%	10.0%	10.0%	7.1%		
3 Inundation/flooding	2.5%		3.3%	2.5%	2.5%	5.0%	2.5%						1.5%		
4 Drainage problem	2.5%	2.5%	3.3%		7.5%	2.5%	7.5%	2.0%	2.5%	10.0%	3.3%	1.7%	3.5%		
5 Lack of farm road										3.3%	3.3%	1.7%	0.6%		
6 Lack of transportation means		2.5%			2.5%						3.3%	1.7%	0.8%		
7 Leveling problem of paddy field						2.5%							0.2%		
<b>2nd serious constraints</b>															
1 Irrigation water shortage in wet season	10.0%	7.5%	3.3%	2.5%	7.5%	2.5%	17.5%	14.0%	7.5%	13.3%	6.7%	10.0%	8.8%		
2 Irrigation water shortage in dry season	27.5%	25.0%	40.0%	32.5%	27.5%	37.5%	40.0%	52.0%	42.5%	13.3%	33.3%	35.0%	34.6%		
3 Inundation/flooding	12.5%	5.0%	3.3%	2.5%	10.0%	10.0%	5.0%					1.7%	4.2%		
4 Drainage problem	30.0%	35.0%	16.7%	32.5%	25.0%	20.0%	10.0%	12.0%	17.5%	36.7%	40.0%	25.0%	24.4%		
5 Lack of farm road			13.3%	5.0%	7.5%		2.5%			3.3%	6.7%	3.3%	3.1%		
6 Lack of transportation means			6.7%	7.5%		2.5%	5.0%	4.0%	5.0%	3.3%	6.7%	10.0%	4.4%		
7 Leveling problem of paddy field		2.5%	3.3%		2.5%			4.0%		16.7%	3.3%	1.7%	2.5%		
<b>3rd serious constraints</b>															
1 Irrigation water shortage in wet season			3.3%			2.5%	2.5%		2.5%	6.7%		6.7%	2.1%		
2 Irrigation water shortage in dry season	7.5%	2.5%	3.3%	7.5%	2.5%	5.0%	2.5%	6.0%		3.3%			3.3%		
3 Inundation/flooding	5.0%	2.5%		2.5%	7.5%	7.5%	7.5%			6.7%	10.0%		3.8%		
4 Drainage problem	25.0%	12.5%	23.3%	20.0%	17.5%	25.0%	30.0%	16.0%	15.0%	13.3%	23.3%	26.7%	20.8%		
5 Lack of farm road	5.0%	7.5%	6.7%	12.5%	10.0%	2.5%	2.5%	6.0%	12.5%	3.3%	10.0%	11.7%	7.7%		
6 Lack of transportation means	12.5%	12.5%	16.7%	5.0%	12.5%	7.5%	10.0%	14.0%	12.5%	16.7%	3.3%	10.0%	11.0%		
7 Leveling problem of paddy field		7.5%			5.0%		10.0%	12.0%	2.5%	3.3%	3.3%	3.3%	4.2%		
<b>VIII-3 Marketing constraints</b>															
<b>Most serious constraints</b>															
1 Unstable market prices of paddy/rice	55.0%	67.5%	76.7%	62.5%	77.5%	67.5%	60.0%	54.0%	45.0%	60.0%	53.3%	48.3%	59.8%		
2 Low market prices of paddy/rice	30.0%	10.0%	16.7%	22.5%	7.5%	17.5%	30.0%	20.0%	30.0%	10.0%	16.7%	13.3%	18.8%		
3 Limitation of market of paddy/rice	5.0%	2.5%		2.5%	2.5%	5.0%		2.0%	2.5%	6.7%	3.3%	1.7%	2.7%		
4 Unstable market prices of other crops		10.0%			2.5%			2.0%	5.0%	6.7%	3.3%	5.0%	2.9%		
5 Low market prices of other crops	2.5%	5.0%	3.3%	2.5%			5.0%	6.0%	7.5%		3.3%	5.0%	3.5%		
6 Limitation of market of other crops															
7 Unstable market prices of livestock		5.0%			2.5%		2.5%	6.0%	2.5%		3.3%	5.0%	2.5%		
8 Low market prices of livestock	2.5%			2.5%				4.0%		6.7%	3.3%	3.3%	1.9%		
9 Limitation of market of livestock												5.0%	0.6%		
10 Lack of or poor farm to market road				5.0%		2.5%		2.0%	2.5%		3.3%	5.0%	1.9%		
<b>2nd serious constraints</b>															
1 Unstable market prices of paddy/rice	15.0%	7.5%	10.0%	15.0%	5.0%	10.0%	17.5%	12.0%	17.5%		6.7%	10.0%	10.8%		
2 Low market prices of paddy/rice	30.0%	22.5%	23.3%	15.0%	15.0%	15.0%	27.5%	18.0%	17.5%	3.3%	13.3%	20.0%	18.8%		
3 Limitation of market of paddy/rice	5.0%	5.0%	3.3%	15.0%	15.0%	17.5%	7.5%	4.0%	10.0%	3.3%	3.3%	6.7%	8.1%		
4 Unstable market prices of other crops	7.5%	17.5%	20.0%	12.5%	12.5%	15.0%	7.5%	6.0%	5.0%	23.3%	20.0%	5.0%	11.7%		
5 Low market prices of other crops	5.0%	15.0%	3.3%	5.0%		5.0%		4.0%		23.3%	6.7%	3.3%	5.4%		
6 Limitation of market of other crops		7.5%		5.0%	2.5%		5.0%	2.0%		3.3%			2.1%		
7 Unstable market prices of livestock	10.0%	5.0%	13.3%	15.0%	17.5%	15.0%	17.5%	14.0%	15.0%	10.0%	13.3%	10.0%	12.9%		
8 Low market prices of livestock	5.0%	7.5%	6.7%	5.0%	2.5%	2.5%	5.0%	22.0%	12.5%	3.3%	6.7%	18.3%	9.0%		
9 Limitation of market of livestock	2.5%											8.3%	1.3%		
10 Lack of or poor farm to market road	2.5%		6.7%	5.0%	2.5%	2.5%	5.0%	8.0%	2.5%	10.0%	10.0%	3.3%	4.6%		
<b>3rd serious constraints</b>															
1 Unstable market prices of paddy/rice	5.0%	7.5%			2.5%			4.0%	5.0%	3.3%		3.3%	2.7%		
2 Low market prices of paddy/rice	5.0%	7.5%	13.3%		10.0%	12.5%	5.0%	8.0%			3.3%		5.2%		
3 Limitation of market of paddy/rice	2.5%	2.5%	3.3%	5.0%	2.5%	2.5%		2.0%				3.3%	2.1%		
4 Unstable market prices of other crops	25.0%	2.5%	3.3%	12.5%	10.0%	7.5%	10.0%	4.0%	7.5%		3.3%		16.7%		
5 Low market prices of other crops	5.0%	7.5%	6.7%	7.5%	7.5%			2.0%	7.5%	6.7%			8.3%		
6 Limitation of market of other crops			3.3%			5.0%							0.6%		
7 Unstable market prices of livestock	12.5%	7.5%	16.7%	17.5%	7.5%	15.0%	12.5%	18.0%	7.5%	26.7%	13.3%	8.3%	13.1%		
8 Low market prices of livestock	5.0%	10.0%	10.0%	7.5%	7.5%	7.5%	17.5%	16.0%	12.5%	16.7%	30.0%	10.0%	12.1%		
9 Limitation of market of livestock				2.5%			2.5%		2.5%			1.7%	0.8%		
10 Lack of or poor farm to market road		7.5%		2.5%	2.5%	2.5%	7.5%	6.0%	2.5%		3.3%	5.0%	3.5%		
<b>VIII-4 Reasons for limited productivity of crops</b>															
<b>Most serious constraints</b>															
1 Drought in wet season	67.5%	80.0%	70.0%	80.0%	67.5%	67.5%	72.5%	68.0%	87.5%	73.3%	66.7%	75.0%	73.1%		
2 Water shortage in dry season	5.0%	5.0%	6.7%		2.5%	10.0%	10.0%	8.0%	2.5%	10.0%	16.7%	5.0%	6.5%		
3 Shortage of farming capital			3.3%	2.5%	2.5%	2.5%	2.5%				3.3%	3.3%	1.7%		
4 Poor seed quality	2.5%		3.3%	7.5%	10.0%	7.5%		4.0%	2.5%	3.3%		3.3%	3.8%		
5 Poor soil	5.0%	10.0%	10.0%	2.5%	5.0%	5.0%	2.5%	14.0%			6.7%	6.7%	5.8%		
6 Limited application of fertilizer	2.5%	2.5%	3.3%		2.5%								0.8%		
7 Damages caused by wild animal (rat)	2.5%		3.3%		2.5%					6.7%	6.7%	1.7%	1.7%		
8 Poor drainage	2.5%				2.5%			2.5%		2.5%			0.8%		
9 Flooding/inundation	5.0%						2.5%		2.5%				0.6%		
10 Inadequate farming technologies				5.0%			2.5%						0.6%		
11 Damages caused by pest & disease	2.5%											1.7%	0.4%		

**Table B3.2-1 Result of Household Survey (10/15)**

Question	Irrigation System & No. of Samples	Battambang			Moung Russey			Pursat			Boribo			Whole
		Vat Balat	Thmat Pong	Baot Saa	Prek Chik	Prolay Po	Ream Kon	Wat Loung	B. P. Ponley	Wat Chrea	Taram	Khvet	Lum Hach	
		40	40	30	40	40	40	40	50	40	30	30	60	
12	Others	5.0%	2.5%		2.5%	5.0%	7.5%	5.0%	6.0%	5.0%	6.7%		3.3%	4.2%
<b>2nd serious constraints</b>														
1	Drought in wet season	7.5%	2.5%	6.7%	2.5%	7.5%	5.0%	20.0%	8.0%	2.5%	10.0%	16.7%	16.7%	9.0%
2	Water shortage in dry season	25.0%	25.0%	30.0%	32.5%	25.0%	35.0%	20.0%	22.0%	30.0%	16.7%	13.3%	28.3%	25.6%
3	Shortage of farming capital	12.5%	10.0%	10.0%	10.0%	7.5%	2.5%	12.5%	12.0%	7.5%	20.0%	13.3%	8.3%	10.2%
4	Poor seed quality	7.5%	10.0%	3.3%	5.0%	7.5%	7.5%	10.0%	10.0%	5.0%	6.7%	20.0%	13.3%	9.0%
5	Poor soil	20.0%	17.5%	36.7%	22.5%	17.5%	17.5%	25.0%	24.0%	40.0%	3.3%	20.0%	25.0%	22.7%
6	Limited application of fertilizer	2.5%	5.0%	3.3%	2.5%			2.5%	4.0%		3.3%			1.9%
7	Damages caused by wild animal (rat)	10.0%	5.0%	3.3%	7.5%	10.0%		5.0%	6.0%	7.5%	16.7%	13.3%	3.3%	7.3%
8	Poor drainage	5.0%	2.5%	3.3%	5.0%	2.5%	5.0%	5.0%	4.0%		13.3%			3.8%
9	Flooding/inundation	2.5%				7.5%	12.5%							1.9%
10	Inadequate farming technologies	2.5%	10.0%		7.5%	5.0%			6.0%	7.5%		3.3%	1.7%	3.8%
11	Damages caused by pest & disease	2.5%				2.5%					6.7%			0.8%
12	Others	2.5%	12.5%	3.3%	5.0%	7.5%	10.0%		4.0%		3.3%		1.7%	4.2%
<b>3rd serious constraints</b>														
1	Drought in wet season	2.5%		6.7%	10.0%	2.5%	7.5%		14.0%	2.5%		3.3%	1.7%	4.4%
2	Water shortage in dry season		5.0%		5.0%		7.5%		4.0%	2.5%	3.3%	3.3%	1.7%	2.7%
3	Shortage of farming capital	7.5%	2.5%	3.3%	12.5%	7.5%	12.5%	7.5%	4.0%	20.0%	3.3%	10.0%	8.3%	8.3%
4	Poor seed quality	12.5%	2.5%	6.7%	2.5%	2.5%	5.0%	15.0%	6.0%	10.0%	6.7%		18.3%	7.9%
5	Poor soil	7.5%	15.0%	3.3%	7.5%	7.5%	7.5%	17.5%	12.0%	17.5%	13.3%	16.7%	28.3%	13.5%
6	Limited application of fertilizer	2.5%	2.5%		2.5%	7.5%	2.5%	5.0%	2.0%	5.0%	3.3%	3.3%	3.3%	3.1%
7	Damages caused by wild animal (rat)	15.0%	17.5%	16.7%	20.0%	10.0%	10.0%	12.5%	14.0%	2.5%	6.7%	6.7%	11.7%	12.1%
8	Poor drainage	12.5%	10.0%	13.3%	10.0%	10.0%	10.0%	5.0%	12.0%	7.5%	6.7%	16.7%	6.7%	9.8%
9	Flooding/inundation		2.5%			5.0%	2.5%				3.3%			1.0%
10	Inadequate farming technologies	5.0%	2.5%	6.7%	12.5%	7.5%	7.5%	7.5%	6.0%	7.5%	13.3%	10.0%	6.7%	7.5%
11	Damages caused by pest & disease	2.5%		3.3%	5.0%	7.5%	2.5%	7.5%	4.0%		10.0%	10.0%	3.3%	4.4%
12	Others	35.0%	40.0%	40.0%	12.5%	32.5%	25.0%	22.5%	22.0%	25.0%	30.0%	20.0%	10.0%	25.2%
VIII-5	<b>Activities/practices to improve rice productivity implemented by the interviewees in the past 3 years (plural answer)</b>													
<b>1st</b>														
1	Increased fertilization doses	45.0%	37.5%	66.7%	25.0%	55.0%	67.5%	60.0%	32.0%	50.0%	33.3%	33.3%	43.3%	45.4%
2	Applied of compost/manure	15.0%	15.0%	10.0%	12.5%	5.0%	5.0%	15.0%	42.0%	17.5%	43.3%	40.0%	25.0%	20.4%
3	Used quality seed (local variety)	12.5%	15.0%	16.7%	20.0%	5.0%	5.0%	12.5%	10.0%	17.5%	10.0%	16.7%	13.3%	12.7%
4	Used quality seed (high yielding variety)	5.0%	12.5%	6.7%	17.5%	17.5%	12.5%	7.5%	8.0%	2.5%	3.3%		10.0%	9.0%
5	Constructed of farm pond	2.5%											1.7%	0.4%
6	Started to use water pump for irrigation	5.0%	5.0%		12.5%	2.5%	2.5%			2.5%	3.3%			2.7%
7	Improved farming practices		2.5%			7.5%	2.5%			2.5%		3.3%	1.7%	1.7%
8	Improved post-harvest practices	2.5%	2.5%											0.4%
9	Changed marketing methods					2.5%								0.2%
10	Others	12.5%	10.0%		12.5%	5.0%	5.0%	5.0%	8.0%	7.5%	6.7%	6.7%	5.0%	7.1%
<b>2nd</b>														
1	Increased fertilization doses	12.5%	12.5%	3.3%	7.5%	2.5%	7.5%	7.5%	4.0%	17.5%	16.7%	6.7%	16.7%	9.8%
2	Applied of compost/manure	25.0%	10.0%	20.0%	15.0%	25.0%	25.0%	25.0%	18.0%	17.5%	16.7%	10.0%	26.7%	20.0%
3	Used quality seed (local variety)	15.0%	25.0%	26.7%	22.5%	25.0%	30.0%	12.5%	38.0%	25.0%	23.3%	46.7%	11.7%	24.4%
4	Used quality seed (high yielding variety)	25.0%	17.5%	23.3%	25.0%	15.0%	15.0%	22.5%	24.0%	20.0%	6.7%	10.0%	20.0%	19.2%
5	Constructed of farm pond	2.5%						2.5%	2.0%					0.6%
6	Started to use water pump for irrigation		15.0%	3.3%		17.5%	2.5%	15.0%	8.0%	10.0%	3.3%			6.3%
7	Improved farming practices	2.5%	2.5%	6.7%			2.5%	5.0%	2.0%		10.0%	13.3%	15.0%	5.0%
8	Improved post-harvest practices	2.5%	2.5%	3.3%	2.5%	7.5%	5.0%	2.5%		6.7%	3.3%			2.7%
9	Changed marketing methods				5.0%	7.5%		2.5%	2.0%	2.5%				1.0%
10	Others	15.0%	15.0%	13.3%	22.5%	7.5%	12.5%	5.0%	2.0%	7.5%	16.7%	10.0%	10.0%	11.0%
<b>3rd</b>														
1	Increased fertilization doses	15.0%	20.0%	16.7%	15.0%	5.0%	5.0%	10.0%	20.0%	10.0%			11.7%	11.3%
2	Applied of compost/manure	5.0%	7.5%	6.7%	2.5%	12.5%	5.0%	5.0%	6.0%	15.0%	6.7%	3.3%	8.3%	7.1%
3	Used quality seed (local variety)	17.5%	7.5%	6.7%	5.0%	7.5%	20.0%	22.5%	6.0%	5.0%	10.0%	10.0%	16.7%	11.5%
4	Used quality seed (high yielding variety)	17.5%	15.0%	10.0%	10.0%	12.5%	12.5%	12.5%	18.0%	20.0%	13.3%	30.0%	18.3%	15.8%
5	Constructed of farm pond	2.5%	2.5%					2.5%	2.0%	2.5%	3.3%	6.7%		1.5%
6	Started to use water pump for irrigation	12.5%	5.0%	16.7%	10.0%	10.0%	10.0%	10.0%	10.0%	7.5%	6.7%	3.3%	5.0%	8.8%
7	Improved farming practices	2.5%		13.3%	7.5%	5.0%	2.5%	7.5%	6.0%	2.5%	20.0%	16.7%	3.3%	6.5%
8	Improved post-harvest practices		2.5%		5.0%	7.5%		2.5%	8.0%	2.5%	3.3%	6.7%		3.1%
9	Changed marketing methods				5.0%	7.5%		25.0%		2.5%	3.3%		3.3%	4.0%
10	Others	30.0%	40.0%	30.0%	40.0%	40.0%	40.0%		24.0%	32.5%	33.3%	23.3%	33.3%	30.6%
<b>4th</b>														
1	Increased fertilization doses	7.5%	7.5%	3.3%	2.5%	12.5%	2.5%	5.0%	12.0%	7.5%			1.7%	5.4%
2	Applied of compost/manure	10.0%	5.0%	16.7%	12.5%	7.5%	7.5%	5.0%	8.0%			6.7%	8.3%	7.3%
3	Used quality seed (local variety)					2.5%	2.5%	2.5%	2.0%	2.5%		3.3%	1.7%	1.5%
4	Used quality seed (high yielding variety)	5.0%	7.5%		2.5%	5.0%	7.5%	2.5%	4.0%	2.5%	10.0%	10.0%	11.7%	5.8%
5	Constructed of farm pond	2.5%	2.5%					2.5%					1.7%	0.8%
6	Started to use water pump for irrigation		5.0%		7.5%	2.5%	7.5%	22.5%	4.0%	10.0%	10.0%	6.7%	5.0%	6.7%
7	Improved farming practices	7.5%	10.0%	6.7%	7.5%	5.0%	5.0%	14.0%	12.5%	10.0%	6.7%	6.7%	13.3%	9.0%
8	Improved post-harvest practices	5.0%		10.0%	2.5%	5.0%		10.0%	2.0%	2.5%	3.3%	6.7%	1.7%	3.8%
9	Changed marketing methods	2.5%			5.0%		2.5%	2.5%	4.0%	2.5%	3.3%	3.3%		2.1%
10	Others	60.0%	62.5%	63.3%	60.0%	60.0%	62.5%	45.0%	50.0%	60.0%	63.3%	56.7%	55.0%	57.7%
VIII-6	<b>Necessary activities to improve rice productivity in the field of the interviewee (farming &amp; farm management; plural answer)</b>													
<b>Most required</b>														
1	Improvement of farming practices	47.5%	60.0%	53.3%	47.5%	37.5%	50.0%	27.5%	44.0%	40.0%	33.3%	40.0%	48.3%	44.4%
2	Use of quality seed (local variety)	10.0%	7.5%	3.3%	5.0%	15.0%	12.5%	20.0%	16.0%	15.0%	13.3%	13.3%	18.3%	12.9%
3	Use of quality seed (high yielding variety)	17.5%	17.5%	13.3%	12.5%	12.5%	7.5%	10.0%	16.0%	15.0%	23.3%	10.0%	11.7%	13.8%
4	Use of adequate doses of fertilizer	7.5%	2.5%	13.3%	12.5%	15.0%	12.5%	17.5%	10.0%	17.5%	3.3%	6.7%	11.7%	11.0%

**Table B3.2-1 Result of Household Survey (11/15)**

Question	Irrigation System & No. of Samples	Battambang			Moung Russey			Pursat			Boribo			Whole	
		Vat Balat	Thmat Pong	Baot Sala	Prek Chik	Proley Po	Ream Kon	Wat Loung	B. P. Ponley	Wat Chrea	Taram	Khvet	Lum Hach		
		40	40	30	40	40	40	40	50	40	30	30	60		
5	Improved leveling of paddy field	2.5 %					2.5 %	5.0 %							0.8 %
6	Planting at proper time			6.7 %	12.5 %	10.0 %		7.5 %	2.5 %		2.5 %	3.3 %	16.7 %		4.6 %
7	Intensive weeding	5.0 %	5.0 %	6.7 %	5.0 %					2.0 %		10.0 %	3.3 %	1.7 %	2.9 %
8	Formation/strengthening of farmers organization		2.5 %			2.5 %	2.5 %				2.5 %		3.3 %	1.7 %	1.3 %
	<b>2nd required</b>														
1	Improvement of farming practices	2.5 %	7.5 %	3.3 %	10.0 %	15.0 %	10.0 %	12.5 %	14.0 %	10.0 %	6.7 %	13.3 %	8.3 %	9.6 %	
2	Use of quality seed (local variety)	10.0 %	32.5 %	26.7 %	32.5 %	27.5 %	32.5 %	17.5 %	18.0 %	15.0 %	13.3 %	30.0 %	15.0 %	22.1 %	
3	Use of quality seed (high yielding variety)	27.5 %	20.0 %	33.3 %	22.5 %	20.0 %	25.0 %	27.5 %	26.0 %	35.0 %	23.3 %	10.0 %	28.3 %	25.2 %	
4	Use of adequate doses of fertilizer	12.5 %	7.5 %	20.0 %	15.0 %	15.0 %	10.0 %	22.5 %	12.0 %	10.0 %	13.3 %	16.7 %	18.3 %	14.4 %	
5	Improved leveling of paddy field	7.5 %	2.5 %			2.5 %	5.0 %	2.5 %		6.0 %	2.5 %	3.3 %	3.3 %	1.7 %	
6	Planting at proper time	15.0 %	7.5 %	3.3 %	7.5 %	7.5 %	5.0 %	5.0 %	14.0 %	12.5 %	6.7 %	6.7 %	13.3 %	9.2 %	
7	Intensive weeding	12.5 %	10.0 %	10.0 %	7.5 %	10.0 %	5.0 %	10.0 %		10.0 %	13.3 %	10.0 %	6.7 %	8.3 %	
8	Formation/strengthening of farmers organization		2.5 %					2.5 %		2.5 %	10.0 %			1.7 %	
	<b>3rd required</b>														
1	Improvement of farming practices	5.0 %	7.5 %	6.7 %	10.0 %	7.5 %	5.0 %	7.5 %	2.0 %	12.5 %	10.0 %		6.7 %	6.7 %	
2	Use of quality seed (local variety)	10.0 %	5.0 %	13.3 %	10.0 %	2.5 %		15.0 %	8.0 %	7.5 %	10.0 %	10.0 %	10.0 %	8.3 %	
3	Use of quality seed (high yielding variety)	10.0 %	17.5 %	6.7 %	7.5 %	5.0 %	12.5 %	5.0 %	10.0 %	7.5 %	10.0 %	23.3 %	25.0 %	12.1 %	
4	Use of adequate doses of fertilizer	10.0 %	15.0 %	16.7 %	12.5 %	17.5 %	22.5 %	22.5 %	24.0 %	20.0 %	6.7 %	23.3 %	10.0 %	16.7 %	
5	Improved leveling of paddy field				10.0 %	5.0 %	2.5 %	5.0 %	2.0 %		6.7 %	3.3 %	5.0 %	3.3 %	
6	Planting at proper time	7.5 %	7.5 %	6.7 %	7.5 %	2.5 %	7.5 %	7.5 %	18.0 %	7.5 %	13.3 %	10.0 %	8.3 %	8.8 %	
7	Intensive weeding	20.0 %	2.5 %	10.0 %	10.0 %	20.0 %	10.0 %	10.0 %	8.0 %	12.5 %	6.7 %	16.7 %	8.3 %	11.0 %	
8	Formation/strengthening of farmers organization		5.0 %			2.5 %		2.5 %	2.0 %	5.0 %	10.0 %			6.7 %	
	<b>4th required</b>														
1	Improvement of farming practices	5.0 %		3.3 %	7.5 %			12.5 %	4.0 %	2.5 %		13.3 %	1.7 %	4.0 %	
2	Use of quality seed (local variety)	12.5 %	10.0 %	10.0 %	10.0 %	10.0 %	10.0 %		8.0 %	10.0 %	6.7 %	3.3 %	8.3 %	8.3 %	
3	Use of quality seed (high yielding variety)		2.5 %			2.5 %	5.0 %	7.5 %	8.0 %	2.5 %			3.3 %	2.9 %	
4	Use of adequate doses of fertilizer	10.0 %	12.5 %	10.0 %	15.0 %	10.0 %	10.0 %	2.5 %	10.0 %	10.0 %	16.7 %		3.3 %	9.0 %	
5	Improved leveling of paddy field		2.5 %					5.0 %	2.0 %		6.7 %	3.3 %	6.7 %	2.3 %	
6	Planting at proper time		5.0 %	6.7 %	2.5 %	10.0 %	7.5 %	5.0 %	6.0 %		6.7 %	13.3 %	6.7 %	5.6 %	
7	Intensive weeding	10.0 %	15.0 %	10.0 %	10.0 %	5.0 %	15.0 %	12.5 %	4.0 %	10.0 %	13.3 %	10.0 %	8.3 %	10.0 %	
8	Formation/strengthening of farmers organization	7.5 %		3.3 %	5.0 %	2.5 %		5.0 %	8.0 %	7.5 %	3.3 %	10.0 %	6.7 %	5.0 %	
<b>VIII-7</b>	<b>Necessary physical works to improve rice</b>														
	<b>Most required</b>														
1	Irrigation water supply for wet season	82.5 %	80.0 %	83.3 %	85.0 %	80.0 %	77.5 %	75.0 %	76.0 %	87.5 %	80.0 %	83.3 %	78.3 %	80.4 %	
2	Irrigation water supply for dry season	2.5 %	10.0 %	3.3 %	5.0 %	10.0 %	10.0 %	15.0 %	10.0 %	2.5 %	3.3 %	13.3 %	16.7 %	9.0 %	
3	Mitigation of inundation/flooding	2.5 %		6.7 %	2.5 %	2.5 %		2.5 %						1.3 %	
4	Drainage improvement	2.5 %	5.0 %	3.3 %	2.5 %	5.0 %	7.5 %		2.0 %	5.0 %	6.7 %	3.3 %	1.7 %	3.5 %	
	<b>2nd required</b>														
1	Irrigation water supply for wet season	7.5 %	15.0 %	10.0 %	5.0 %	15.0 %	7.5 %	17.5 %	18.0 %	10.0 %	6.7 %	10.0 %	15.0 %	11.9 %	
2	Irrigation water supply for dry season	47.5 %	47.5 %	53.3 %	55.0 %	35.0 %	42.5 %	45.0 %	40.0 %	52.5 %	36.7 %	46.7 %	41.7 %	45.0 %	
3	Mitigation of inundation/flooding	10.0 %	5.0 %		2.5 %	10.0 %	22.5 %	2.5 %	2.0 %		6.7 %	3.3 %	5.0 %	5.8 %	
4	Drainage improvement	20.0 %	15.0 %	13.3 %	12.5 %	22.5 %	7.5 %	22.5 %	18.0 %	12.5 %	36.7 %	23.3 %	23.3 %	18.8 %	
	<b>3rd required</b>														
1	Irrigation water supply for wet season	2.5 %		6.7 %		5.0 %		5.0 %	2.0 %	2.5 %		3.3 %	6.7 %	2.9 %	
2	Irrigation water supply for dry season		5.0 %		5.0 %	5.0 %	12.5 %	5.0 %	12.0 %	5.0 %	6.7 %	3.3 %	3.3 %	5.4 %	
3	Mitigation of inundation/flooding	12.5 %	7.5 %	3.3 %	5.0 %	5.0 %	12.5 %	10.0 %	4.0 %	2.5 %	3.3 %	3.3 %	3.3 %	6.0 %	
4	Drainage improvement	40.0 %	37.5 %	23.3 %	40.0 %	25.0 %	37.5 %	27.5 %	28.0 %	30.0 %	23.3 %	40.0 %	26.7 %	31.5 %	
	<b>4th required</b>														
1	Irrigation water supply for wet season		5.0 %				5.0 %							0.8 %	
2	Irrigation water supply for dry season	5.0 %		3.3 %		2.5 %	2.5 %	2.5 %	4.0 %	2.5 %	3.3 %		6.7 %	2.9 %	
3	Mitigation of inundation/flooding	2.5 %	2.5 %		5.0 %	2.5 %	2.5 %	5.0 %	4.0 %	7.5 %	13.3 %	6.7 %	6.7 %	4.8 %	
4	Drainage improvement	5.0 %		6.7 %	2.5 %	10.0 %	12.5 %	5.0 %					6.7 %	4.2 %	
<b>SECTION IX</b>	<b>LIVESTOCK CONSTRAINTS</b>														
	<b>Most serious constraints</b>														
1	Low productivity	47.5 %	30.0 %	33.3 %	17.5 %	27.5 %	32.5 %	30.0 %	38.0 %	35.0 %	3.3 %	36.7 %	33.3 %	31.0 %	
2	Shortage of feed	5.0 %	15.0 %	13.3 %	7.5 %	7.5 %	10.0 %	12.5 %	10.0 %	15.0 %	13.3 %	10.0 %	20.0 %	11.9 %	
3	Low or unstable market prices	5.0 %	2.5 %		2.5 %	5.0 %	2.5 %	7.5 %	4.0 %	7.5 %	3.3 %	3.3 %	10.0 %	4.8 %	
4	Market availability		2.5 %						2.0 %					0.6 %	
5	Losses due to diseases	42.5 %	50.0 %	43.3 %	62.5 %	50.0 %	42.5 %	45.0 %	40.0 %	35.0 %	63.3 %	43.3 %	33.3 %	45.0 %	
6	Insufficient veterinary services			3.3 %	2.5 %	5.0 %	5.0 %	5.0 %	4.0 %		10.0 %	6.7 %	1.7 %	3.3 %	
7	Insufficient extension services			3.3 %	5.0 %	2.5 %			2.0 %	5.0 %				1.5 %	
8	Difficulty in obtaining good breed														
	<b>2nd serious constraints</b>														
1	Low productivity	10.0 %	15.0 %	16.7 %	32.5 %	25.0 %	25.0 %	20.0 %	10.0 %	12.5 %	6.7 %	13.3 %	11.7 %	16.5 %	
2	Shortage of feed	17.5 %	12.5 %	23.3 %	10.0 %	15.0 %	12.5 %	12.5 %	14.0 %	20.0 %	23.3 %	13.3 %	11.7 %	15.0 %	
3	Low or unstable market prices	17.5 %	7.5 %	10.0 %	7.5 %	7.5 %	2.5 %	12.5 %	10.0 %	12.5 %	3.3 %	13.3 %	11.7 %	9.8 %	
4	Market availability		5.0 %		2.5 %	2.5 %	2.5 %	2.5 %	2.0 %	2.5 %			3.3 %	2.1 %	
5	Losses due to diseases	32.5 %	20.0 %	26.7 %	17.5 %	25.0 %	27.5 %	25.0 %	38.0 %	32.5 %	13.3 %	16.7 %	35.0 %	26.9 %	
6	Insufficient veterinary services	7.5 %	12.5 %	13.3 %	17.5 %	10.0 %	2.5 %	15.0 %	14.0 %	12.5 %	16.7 %	33.3 %	20.0 %	14.4 %	
7	Insufficient extension services	7.5 %	10.0 %					7.5 %	8.0 %		20.0 %	6.7 %	1.7 %	4.8 %	
8	Difficulty in obtaining good breed						5.0 %				3.3 %		1.7 %	0.8 %	
	<b>3rd serious constraints</b>														
1	Low productivity	7.5 %	12.5 %	10.0 %	10.0 %	5.0 %	2.5 %	10.0 %	8.0 %	10.0 %		3.3 %	11.7 %	7.9 %	
2	Shortage of feed	5.0 %	7.5 %	6.7 %	12.5 %	5.0 %	10.0 %	5.0 %	6.0 %	2.5 %	10.0 %		10.0 %	6.9 %	
3	Low or unstable market prices	5.0 %	5.0 %			2.5 %	5.0 %	12.5 %	8.0 %	10.0 %	10.0 %	23.3 %	8.3 %	7.3 %	
4	Market availability						2.5 %	2.5 %		2.5 %				0.6 %	
5	Losses due to diseases	2.5 %	2.5 %	6.7 %	2.5 %	7.5 %	2.5 %	12.5 %	10.0 %	10.0 %	3.3 %	13.3 %	20.0 %	8.3 %	
6	Insufficient veterinary services	17.5 %	20.0 %	13.3 %	17.5 %	15.0 %	15.0 %	12.5 %	24.0 %	25.0 %	30.0 %	20.0 %	16.7 %	18.8 %	

**Table B3.2-1 Result of Household Survey (12/15)**

Question	Irrigation System & No. of Samples	Battambang			Moung Russey			Pursat			Boribo			Whole
		Vat Balat	Thmat Pong	Baot Sala	Prek Chik	Prolay Po	Ream Kon	Wat Loung	B. P. Ponleay	Wat Chrea	Taram	Khvet	Lum Hach	
		40	40	30	40	40	40	40	50	40	30	30	60	
7	Insufficient extension services	17.5 %	10.0 %	13.3 %	20.0 %	17.5 %	20.0 %	10.0 %	22.0 %	12.5 %	3.3 %	10.0 %	8.3 %	14.0 %
8	Difficulty in obtaining good breed			3.3 %	2.5 %		2.5 %			6.7 %		3.3 %	1.7 %	1.5 %
<b>SECTION X</b>	<b>EXPECTATIONS</b>													
<b>X-1</b>	<b>Farming (agronomic &amp; farm management)</b>													
	<b>Most required</b>													
1	Productivity improvement of wet season rice	92.5 %	87.5 %	90.0 %	95.0 %	90.0 %	90.0 %	77.5 %	84.0 %	87.5 %	96.7 %	66.7 %	85.0 %	86.9 %
2	Productivity improvement of dry season rice				2.5 %	5.0 %	5.0 %	12.5 %	4.0 %	5.0 %		16.7 %	10.0 %	5.2 %
3	Productivity improvement of field crops	2.5 %	5.0 %			2.5 %	2.5 %	2.5 %	4.0 %	2.5 %		6.7 %	1.7 %	2.5 %
4	Productivity improvement of vegetables		2.5 %		2.5 %			2.5 %	2.0 %		3.3 %			1.0 %
5	Productivity improvement of livestock/poultry													
6	Increasing livestock holding size & production			3.3 %			2.5 %		4.0 %			3.3 %	1.7 %	1.3 %
7	Increasing poultry holding size & production	2.5 %												0.2 %
8	Strengthening or formation of farmers organizations		2.5 %						2.0 %					0.4 %
9	Improvement of post-harvest operation									5.0 %		3.3 %		0.6 %
10	Others	2.5 %	2.5 %	6.7 %		2.5 %		5.0 %				3.3 %	1.7 %	1.9 %
	<b>2nd required</b>													
1	Productivity improvement of wet season rice	5.0 %	2.5 %	6.7 %		5.0 %	5.0 %	15.0 %	4.0 %	7.5 %	6.7 %	20.0 %	11.7 %	7.3 %
2	Productivity improvement of dry season rice	42.5 %	30.0 %	33.3 %	37.5 %	37.5 %	57.5 %	27.5 %	34.0 %	37.5 %	16.7 %	10.0 %	18.3 %	32.1 %
3	Productivity improvement of field crops	20.0 %	32.5 %	36.7 %	30.0 %	20.0 %	20.0 %	20.0 %	20.0 %	27.5 %	23.3 %	30.0 %	28.3 %	25.4 %
4	Productivity improvement of vegetables	15.0 %	2.5 %	6.7 %	7.5 %	7.5 %	2.5 %	10.0 %	12.0 %	2.5 %	6.7 %	13.3 %	15.0 %	8.8 %
5	Productivity improvement of livestock/poultry		2.5 %				2.5 %	12.5 %	12.0 %	5.0 %	13.3 %	6.7 %	8.3 %	5.4 %
6	Increasing livestock holding size & production	5.0 %	12.5 %	16.7 %	17.5 %	15.0 %	10.0 %	7.5 %	14.0 %	20.0 %	20.0 %	13.3 %	15.0 %	13.8 %
7	Increasing poultry holding size & production	2.5 %			2.5 %	2.5 %		2.5 %				3.3 %	1.7 %	1.3 %
8	Strengthening or formation of farmers organizations	2.5 %			2.5 %	7.5 %					13.3 %			1.9 %
9	Improvement of post-harvest operation				2.5 %			2.5 %	4.0 %				1.7 %	1.0 %
10	Others	7.5 %	17.5 %			5.0 %	2.5 %	2.5 %				3.3 %		3.1 %
	<b>3rd required</b>													
1	Productivity improvement of wet season rice			3.3 %	2.5 %		2.5 %		2.0 %			3.3 %	1.7 %	1.3 %
2	Productivity improvement of dry season rice	2.5 %	7.5 %	3.3 %		5.0 %	5.0 %	5.0 %			10.0 %		5.0 %	3.5 %
3	Productivity improvement of field crops	15.0 %	5.0 %	13.3 %	15.0 %	12.5 %	5.0 %	7.5 %	18.0 %	20.0 %	10.0 %	10.0 %	16.7 %	12.7 %
4	Productivity improvement of vegetables	15.0 %	22.5 %	33.3 %	10.0 %	7.5 %	25.0 %	20.0 %	22.0 %	12.5 %	3.3 %	13.3 %	8.3 %	15.8 %
5	Productivity improvement of livestock/poultry	10.0 %	5.0 %	3.3 %	15.0 %	10.0 %	5.0 %	10.0 %	10.0 %	7.5 %	16.7 %	10.0 %	13.3 %	9.8 %
6	Increasing livestock holding size & production	22.5 %	2.5 %	6.7 %	15.0 %	15.0 %	20.0 %	22.5 %	12.0 %	5.0 %	10.0 %	16.7 %	15.0 %	13.8 %
7	Increasing poultry holding size & production	5.0 %	12.5 %	6.7 %	12.5 %	12.5 %	12.5 %	7.5 %	2.0 %	20.0 %	3.3 %	6.7 %	10.0 %	9.4 %
8	Strengthening or formation of farmers organizations	5.0 %	2.5 %	3.3 %	7.5 %	2.5 %			6.0 %	12.5 %	13.3 %	16.7 %	8.3 %	6.3 %
9	Improvement of post-harvest operation					5.0 %			6.0 %			6.7 %	3.3 %	1.9 %
10	Others	25.0 %	42.5 %	26.7 %	22.5 %	30.0 %	25.0 %	27.5 %	22.0 %	22.5 %	33.3 %	16.7 %	18.3 %	25.6 %
<b>X-2</b>	<b>Farming (farming system)</b>													
	<b>Primarily intended</b>													
1	Double cropping of rice	77.5 %	80.0 %	83.3 %	70.0 %	75.0 %	77.5 %	70.0 %	66.0 %	82.5 %	66.7 %	66.7 %	80.0 %	74.8 %
2	Stable single cropping of rice	17.5 %	5.0 %	13.3 %	12.5 %	12.5 %	17.5 %	10.0 %	16.0 %	7.5 %	30.0 %	16.7 %	11.7 %	13.8 %
3	Multiple farming (crop + livestock etc.)	5.0 %	7.5 %	3.3 %	10.0 %	12.5 %	5.0 %	17.5 %	12.0 %	5.0 %		13.3 %	5.0 %	8.1 %
4	Crop diversification		7.5 %		7.5 %			2.5 %	4.0 %	5.0 %		3.3 %	1.7 %	2.7 %
5	No idea								2.0 %		3.3 %		1.7 %	0.6 %
	<b>2nd Intended</b>													
1	Double cropping of rice	5.0 %	2.5 %	6.7 %	7.5 %	7.5 %	10.0 %	15.0 %	10.0 %	2.5 %		13.3 %	11.7 %	7.9 %
2	Stable single cropping of rice	25.0 %	27.5 %	23.3 %	27.5 %	35.0 %	30.0 %	27.5 %	28.0 %	27.5 %	13.3 %	20.0 %	20.0 %	25.6 %
3	Multiple farming (crop + livestock etc.)	42.5 %	45.0 %	40.0 %	42.5 %	40.0 %	37.5 %	35.0 %	34.0 %	42.5 %	43.3 %	36.7 %	41.7 %	40.0 %
4	Crop diversification	5.0 %	7.5 %	16.7 %	7.5 %	2.5 %	5.0 %	10.0 %	6.0 %	12.5 %	16.7 %	13.3 %	10.0 %	9.0 %
5	No idea	22.5 %	17.5 %	13.3 %	15.0 %	15.0 %	17.5 %	12.5 %	22.0 %	15.0 %	26.7 %	16.7 %	16.7 %	17.5 %
	<b>3rd intended</b>													
1	Double cropping of rice		5.0 %					2.5 %	2.0 %		3.3 %	3.3 %	3.3 %	1.7 %
2	Stable single cropping of rice	7.5 %	10.0 %	10.0 %	2.5 %	7.5 %	12.5 %	7.5 %	14.0 %	5.0 %	13.3 %	13.3 %	8.3 %	9.2 %
3	Multiple farming (crop + livestock etc.)	17.5 %	5.0 %	10.0 %	10.0 %	5.0 %	12.5 %	10.0 %	18.0 %	15.0 %	13.3 %	13.3 %	13.3 %	12.1 %
4	Crop diversification	25.0 %	20.0 %	23.3 %	35.0 %	35.0 %	20.0 %	35.0 %	26.0 %	35.0 %	30.0 %	23.3 %	25.0 %	27.7 %
5	No idea	50.0 %	60.0 %	56.7 %	52.5 %	52.5 %	55.0 %	45.0 %	40.0 %	45.0 %	40.0 %	46.7 %	50.0 %	49.4 %
<b>X-3</b>	<b>Farming (physical)</b>													
	<b>Most required</b>													
1	Adequate (volume/timing) irrigation water supply in wet season	77.5 %	92.5 %	86.7 %	85.0 %	87.5 %	85.0 %	82.5 %	84.0 %	85.0 %	76.7 %	76.7 %	83.3 %	83.8 %
2	Adequate (volume/timing) irrigation water supply in dry season	10.0 %		6.7 %		5.0 %	10.0 %	10.0 %	8.0 %	5.0 %		10.0 %	6.7 %	6.0 %
3	Mitigation of inundation & flooding	2.5 %	2.5 %		5.0 %	5.0 %	5.0 %	2.5 %		2.5 %			1.7 %	2.3 %
4	Construction/rehabilitation of farm road	2.5 %		3.3 %	2.5 %							6.7 %		1.0 %
5	Construction/rehabilitation of farm to market road									2.5 %		3.3 %	1.7 %	0.6 %

**Table B3.2-1 Result of Household Survey (13/15)**

Question	Irrigation System & No. of Samples	Battambang			Moung Russey			Pursat			Boribo			Whole
		Vat Balat	Thmat Pong	Baot Sala	Prek Chik	Prolay Po	Ream Kon	Wat Loung	B. P. Pongley	Wat Chrea	Taram	Khvet	Lum Hach	
		40	40	30	40	40	40	40	50	40	30	30	60	
6	Drainage improvement	2.5 %	2.5 %							13.3 %		3.3 %	1.7 %	
7	Leveling of paddy field				2.5 %				2.0 %				0.6 %	
	<b>2nd required</b>													
1	Adequate (volume/timing) irrigation water supply in wet season	10.0 %	5.0 %	3.3 %	7.5 %	2.5 %	7.5 %	15.0 %	12.0 %	12.5 %	3.3 %	6.7 %	13.3 %	8.8 %
2	Adequate (volume/timing) irrigation water supply in dry season	37.5 %	50.0 %	50.0 %	47.5 %	50.0 %	47.5 %	42.5 %	56.0 %	47.5 %	36.7 %	50.0 %	45.0 %	46.9 %
3	Mitigation of inundation & flooding	10.0 %	5.0 %	3.3 %	2.5 %	7.5 %	17.5 %	2.5 %			10.0 %		1.7 %	4.8 %
4	Construction/rehabilitation of farm road	7.5 %		3.3 %	2.5 %	2.5 %		7.5 %	2.0 %		6.7 %	3.3 %	1.7 %	3.1 %
5	Construction/rehabilitation of farm to market road	2.5 %			7.5 %				2.0 %	2.5 %		3.3 %	6.7 %	2.3 %
6	Drainage improvement	10.0 %	17.5 %	16.7 %	12.5 %	17.5 %	7.5 %	17.5 %	8.0 %	15.0 %	20.0 %	23.3 %	18.3 %	15.0 %
7	Leveling of paddy field	7.5 %	2.5 %			5.0 %			4.0 %	2.5 %	10.0 %	6.7 %	5.0 %	4.0 %
	<b>3rd required</b>													
1	Adequate (volume/timing) irrigation water supply in wet season	2.5 %		3.3 %	2.5 %	2.5 %	5.0 %		2.0 %		6.7 %	6.7 %	1.7 %	2.5 %
2	Adequate (volume/timing) irrigation water supply in dry season	2.5 %	5.0 %	6.7 %	2.5 %	10.0 %		7.5 %	12.0 %	7.5 %	6.7 %	6.7 %	10.0 %	6.7 %
3	Mitigation of inundation & flooding	12.5 %	5.0 %	3.3 %	5.0 %	5.0 %	15.0 %	10.0 %	4.0 %	7.5 %			1.7 %	5.8 %
4	Construction/rehabilitation of farm road	5.0 %	10.0 %		5.0 %	2.5 %		5.0 %	6.0 %	2.5 %	3.3 %	3.3 %	11.7 %	5.0 %
5	Construction/rehabilitation of farm to market road	7.5 %	2.5 %	6.7 %	10.0 %				2.0 %	5.0 %	6.7 %		10.0 %	4.4 %
6	Drainage improvement	22.5 %	30.0 %	26.7 %	27.5 %	35.0 %	42.5 %	27.5 %	26.0 %	27.5 %	20.0 %	26.7 %	20.0 %	27.5 %
7	Leveling of paddy field				2.5 %	7.5 %	2.5 %	12.5 %	8.0 %	7.5 %	13.3 %	10.0 %	8.3 %	6.0 %
X-4	<b>Agricultural support services</b>													
	<b>Most required</b>													
1	Field Extension services (demonstration / field guidance)	65.0 %	75.0 %	53.3 %	65.0 %	67.5 %	75.0 %	52.5 %	60.0 %	65.0 %	60.0 %	66.7 %	65.0 %	64.4 %
2	Provision of quality seed	17.5 %	15.0 %	13.3 %	15.0 %	15.0 %	10.0 %	40.0 %	24.0 %	20.0 %	23.3 %	20.0 %	18.3 %	19.4 %
3	Farmer training (technical & host-harvest operation)	12.5 %	7.5 %	13.3 %	10.0 %	10.0 %	2.5 %	5.0 %	8.0 %	7.5 %	10.0 %	10.0 %	13.3 %	9.2 %
4	Farmer training (organization, marketing, farm management)		2.5 %	3.3 %			2.5 %	2.5 %			3.3 %	3.3 %	1.7 %	1.5 %
5	Support to organize farmers						2.5 %							0.2 %
6	Provision of market information	2.5 %				2.5 %			2.0 %					0.6 %
7	Provision of farm credit				2.5 %	2.5 %	2.5 %						1.7 %	0.8 %
8	Provision of fertilizer			16.7 %	5.0 %	2.5 %	5.0 %		4.0 %	5.0 %	3.3 %			3.1 %
	<b>2nd required</b>													
1	Field Extension services (demonstration / field guidance)	12.5 %	17.5 %	13.3 %	7.5 %	10.0 %	15.0 %	22.5 %	18.0 %	17.5 %	20.0 %	10.0 %	10.0 %	14.4 %
2	Provision of quality seed	52.5 %	45.0 %	30.0 %	45.0 %	50.0 %	55.0 %	30.0 %	34.0 %	45.0 %	36.7 %	50.0 %	48.3 %	43.8 %
3	Farmer training (technical & host-harvest operation)	17.5 %	25.0 %	30.0 %	17.5 %	17.5 %	20.0 %	32.5 %	18.0 %	25.0 %	20.0 %	30.0 %	26.7 %	23.1 %
4	Farmer training (organization, marketing, farm management)	2.5 %	2.5 %		5.0 %	10.0 %	2.5 %	10.0 %	10.0 %	7.5 %	6.7 %	6.7 %	1.7 %	5.4 %
5	Support to organize farmers	7.5 %	2.5 %	3.3 %	7.5 %	2.5 %		2.5 %	4.0 %	2.5 %				2.7 %
6	Provision of market information	2.5 %	2.5 %	10.0 %	7.5 %	5.0 %		2.5 %	4.0 %					2.7 %
7	Provision of farm credit		2.5 %	3.3 %		2.5 %	2.5 %		4.0 %		3.3 %		3.3 %	1.9 %
8	Provision of fertilizer	2.5 %		10.0 %	5.0 %	2.5 %	5.0 %		6.0 %		6.7 %		5.0 %	3.5 %
	<b>3rd required</b>													
1	Field Extension services (demonstration / field guidance)	12.5 %		6.7 %	5.0 %	10.0 %	5.0 %	7.5 %	2.0 %	5.0 %	3.3 %	6.7 %	10.0 %	6.3 %
2	Provision of quality seed	2.5 %	10.0 %	13.3 %	5.0 %		7.5 %		18.0 %	2.5 %	3.3 %	23.3 %		6.7 %
3	Farmer training (technical & host-harvest operation)	35.0 %	27.5 %	20.0 %	35.0 %	30.0 %	35.0 %	22.5 %	22.0 %	32.5 %	26.7 %	33.3 %	25.0 %	28.5 %
4	Farmer training (organization, marketing, farm management)	12.5 %	10.0 %	23.3 %	12.5 %	12.5 %	10.0 %	12.5 %	12.0 %	10.0 %	13.3 %	3.3 %	13.3 %	12.1 %
5	Support to organize farmers		7.5 %	6.7 %		7.5 %	7.5 %	5.0 %	4.0 %	7.5 %	10.0 %	6.7 %	5.0 %	5.4 %
6	Provision of market information	5.0 %	2.5 %	6.7 %	5.0 %	7.5 %		2.5 %	4.0 %	7.5 %	6.7 %	6.7 %	3.3 %	4.6 %
7	Provision of farm credit	7.5 %	7.5 %		5.0 %	5.0 %	10.0 %		4.0 %				6.7 %	4.2 %
8	Provision of fertilizer	5.0 %	15.0 %		12.5 %	10.0 %	10.0 %	27.5 %	12.0 %	10.0 %	10.0 %	10.0 %	16.7 %	12.1 %
SECTION XI	PARTICIPATION IN AGRICULTURAL SUPPORT/PROJECT ACTIVITIES IN THE PAST													
PART 3	IRRIGATION, WATER MANAGEMENT & FARMERS WATER USERS COMMUNITY (FWUC)													
SECTION I	PARTICIPATORY AWARENESS LEVEL FOR THIS PROJECT													
1	To participate to construction of on-farm irrigation facilities													
	<b>Construction works</b>													
	YES	92.5 %	97.5 %	100.0 %	97.5 %	97.5 %	97.5 %	92.5 %	96.0 %	100.0 %	83.3 %	86.7 %	90.0 %	94.4 %
	NO	7.5 %	2.5 %		2.5 %	2.5 %	2.5 %	7.5 %	4.0 %		16.7 %	13.3 %	10.0 %	5.6 %
	<b>Carrying works of construction materials</b>													
	YES	85.0 %	92.5 %	96.7 %	95.0 %	90.0 %	95.0 %	90.0 %	90.0 %	95.0 %	80.0 %	83.3 %	81.7 %	89.4 %
	NO	15.0 %	7.5 %	3.3 %	5.0 %	10.0 %	5.0 %	10.0 %	10.0 %	5.0 %	20.0 %	16.7 %	18.3 %	10.6 %
	<b>Assistance works (measurement, etc.)</b>													
	YES	90.0 %	95.0 %	96.7 %	100.0 %	95.0 %	95.0 %	95.0 %	94.0 %	97.5 %	73.3 %	80.0 %	90.0 %	92.3 %
	NO	10.0 %	5.0 %	3.3 %		5.0 %	5.0 %	5.0 %	6.0 %	2.5 %	26.7 %	20.0 %	10.0 %	7.7 %
	<b>Sharing the construction cost</b>													
	YES	100.0 %	100.0 %	100.0 %	100.0 %	97.5 %	97.5 %	97.5 %	94.0 %	97.5 %	83.3 %	80.0 %	83.3 %	94.2 %
	NO					2.5 %	2.5 %	2.5 %	6.0 %	2.5 %	16.7 %	20.0 %	16.7 %	5.8 %
	<b>Donation of local materials for construction</b>													
	YES	95.0 %	92.5 %	96.7 %	92.5 %	82.5 %	92.5 %	90.0 %	82.0 %	90.0 %	83.3 %	90.0 %	78.3 %	88.1 %
	NO	5.0 %	7.5 %	3.3 %	7.5 %	17.5 %	7.5 %	10.0 %	18.0 %	10.0 %	16.7 %	10.0 %	21.7 %	11.9 %
	<b>Donation of equipment for construction works</b>													
	YES	97.5 %	100.0 %	100.0 %	97.5 %	100.0 %	100.0 %	97.5 %	94.0 %	97.5 %	83.3 %	90.0 %	91.7 %	95.8 %

**Table B3.2-1 Result of Household Survey (14/15)**

Question		Irrigation System & No. of Samples												Whole
		Battambang			Moung Russey			Pursat			Boribo			
		Vat Balat	Thmat Pong	Boat Sata	Prek Chik	Proloy Po	Ream Kon	Wat Loung	B. P. Ponley	Wat Chrea	Taram	Khvet	Lum Hech	
		40	40	30	40	40	40	40	50	40	30	30	60	480
	NO	2.5 %			2.5 %			2.5 %	6.0 %	2.5 %	16.7 %	10.0 %	8.3 %	4.2 %
	Donation of draft animals													
	YES	82.5 %	95.0 %	96.7 %	97.5 %	85.0 %	92.5 %	92.5 %	78.0 %	90.0 %	86.7 %	86.7 %	81.7 %	88.1 %
	NO	17.5 %	5.0 %	3.3 %	2.5 %	15.0 %	7.5 %	7.5 %	22.0 %	10.0 %	13.3 %	13.3 %	18.3 %	11.9 %
2	To be a member of FWUC													
	YES	100.0 %	100.0 %	96.7 %	100.0 %	97.5 %	92.5 %	97.5 %	90.0 %	97.5 %	90.0 %	96.7 %	95.0 %	96.0 %
	NO			3.3 %		2.5 %	7.5 %	2.5 %	10.0 %	2.5 %	10.0 %	3.3 %	5.0 %	4.0 %
3	To participate in FWUC meeting													
	YES	100.0 %	100.0 %	90.0 %	97.5 %	92.5 %	92.5 %	97.5 %	92.0 %	92.5 %	90.0 %	100.0 %	95.0 %	95.0 %
	NO			10.0 %	2.5 %	7.5 %	7.5 %	2.5 %	8.0 %	5.0 %	10.0 %		5.0 %	4.8 %
4	To pay water charge by cash													
	YES	95.0 %	90.0 %	93.3 %	97.5 %	85.0 %	82.5 %	95.0 %	90.0 %	90.0 %	80.0 %	83.3 %	86.7 %	89.2 %
	NO	5.0 %	10.0 %	6.7 %	2.5 %	15.0 %	17.5 %	5.0 %	10.0 %	10.0 %	20.0 %	16.7 %	13.3 %	10.8 %
	If "No", could you pay it by crops													
	YES	75.0 %	77.5 %	83.3 %	47.5 %	67.5 %	75.0 %	92.5 %	88.0 %	75.0 %	6.7 %	13.3 %	86.7 %	69.0 %
	NO	25.0 %	22.5 %	16.7 %	52.5 %	32.5 %	25.0 %	7.5 %	12.0 %	25.0 %	93.3 %	86.7 %	13.3 %	31.0 %
5	To pay member fee of FWUC													
	YES	97.5 %	87.5 %	93.3 %	95.0 %	85.0 %	87.5 %	95.0 %	90.0 %	92.5 %	76.7 %	83.3 %	80.0 %	88.5 %
	NO	2.5 %	12.5 %	6.7 %	5.0 %	15.0 %	12.5 %	5.0 %	10.0 %	7.5 %	23.3 %	16.7 %	20.0 %	11.5 %
	If "No", could you pay it by crops													
	YES	77.5 %	82.5 %	83.3 %	72.5 %	67.5 %	72.5 %	92.5 %	82.0 %	70.0 %	6.7 %	13.3 %	65.0 %	67.7 %
	NO	22.5 %	17.5 %	16.7 %	27.5 %	32.5 %	27.5 %	7.5 %	18.0 %	30.0 %	93.3 %	86.7 %	35.0 %	32.3 %
	To participate to maintenance of irrigation facilities													
	Desilting													
	YES	92.5 %	90.0 %	93.3 %	100.0 %	92.5 %	97.5 %	92.5 %	92.0 %	95.0 %	83.3 %	86.7 %	88.3 %	92.1 %
	NO	7.5 %	10.0 %	6.7 %		7.5 %	2.5 %	7.5 %	8.0 %	5.0 %	16.7 %	13.3 %	11.7 %	7.9 %
	Weeding													
	YES	95.0 %	95.0 %	100.0 %	100.0 %	95.0 %	95.0 %	92.5 %	96.0 %	97.5 %	86.7 %	90.0 %	91.7 %	94.6 %
	NO	5.0 %	5.0 %			5.0 %	5.0 %	7.5 %	4.0 %	2.5 %	13.3 %	10.0 %	8.3 %	5.4 %
	Repairing													
	YES	90.0 %	90.0 %	96.7 %	100.0 %	95.0 %	95.0 %	92.5 %	94.0 %	95.0 %	83.3 %	86.7 %	86.7 %	92.1 %
	NO	10.0 %	10.0 %	3.3 %		5.0 %	5.0 %	7.5 %	6.0 %	5.0 %	16.7 %	13.3 %	13.3 %	7.9 %
7	To participate to operation of irrigation facilities													
	Gate operation													
	YES	87.5 %	90.0 %	96.7 %	100.0 %	87.5 %	92.5 %	95.0 %	92.0 %	97.5 %	80.0 %	76.7 %	85.0 %	90.2 %
	NO	12.5 %	10.0 %	3.3 %		12.5 %	7.5 %	5.0 %	8.0 %	2.5 %	20.0 %	23.3 %	15.0 %	9.8 %
	Water distribution													
	YES	90.0 %	90.0 %	96.7 %	100.0 %	87.5 %	92.5 %	95.0 %	98.0 %	100.0 %	83.3 %	90.0 %	88.3 %	92.7 %
	NO	10.0 %	10.0 %	3.3 %		12.5 %	7.5 %	5.0 %	2.0 %		16.7 %	10.0 %	11.7 %	7.3 %
<b>SECTION II</b>	<b>NEGATIVE EFFECT</b>													
1	To a deeper inundation depth													
1	Not accept						7.5 %	2.5 %	2.0 %	2.5 %	3.3 %	10.0 %	5.0 %	2.7 %
2	Need compensation	25.0 %	20.0 %	10.0 %	12.5 %	12.5 %	17.5 %	30.0 %	26.0 %	22.5 %	50.0 %	40.0 %	46.7 %	26.5 %
3	No choice	2.5 %	10.0 %	13.3 %		10.0 %	2.5 %	2.5 %	8.0 %	7.5 %	10.0 %	10.0 %	6.7 %	6.7 %
4	No problem	72.5 %	70.0 %	76.7 %	87.5 %	77.5 %	72.5 %	65.0 %	64.0 %	67.5 %	36.7 %	40.0 %	41.7 %	64.2 %
	If he/she chooses "2 Need compensation", what does he/she want to compensation?													
1	Money	2.5 %	7.5 %		2.5 %	2.5 %	2.5 %	5.0 %		2.5 %	6.7 %	6.7 %	5.0 %	3.5 %
2	Other land	2.5 %	10.0 %	10.0 %	10.0 %	10.0 %	17.5 %	30.0 %	26.0 %	22.5 %	50.0 %	33.3 %	43.3 %	22.5 %
3	Both	2.5 %							2.0 %	2.5 %		3.3 %	3.3 %	1.3 %
4	Others	92.5 %	82.5 %	90.0 %	87.5 %	87.5 %	80.0 %	65.0 %	72.0 %	72.5 %	43.3 %	56.7 %	48.3 %	72.7 %
2	To loss of present cultivation on reservoir area and/or canal													
1	Not accept	7.5 %	2.5 %			2.5 %	7.5 %		2.0 %	7.5 %			1.7 %	2.7 %
2	Need compensation	27.5 %	27.5 %	23.3 %	17.5 %	25.0 %	32.5 %	35.0 %	34.0 %	35.0 %	76.7 %	70.0 %	53.3 %	37.5 %
3	No choice		7.5 %	6.7 %	2.5 %	2.5 %		5.0 %	4.0 %	5.0 %	3.3 %	6.7 %	6.7 %	4.2 %
4	No problem	65.0 %	62.5 %	70.0 %	80.0 %	70.0 %	60.0 %	60.0 %	60.0 %	52.5 %	20.0 %	23.3 %	38.3 %	55.6 %
	If he/she chooses "2 Need compensation", what does he/she want to compensation?													
1	Money	10.0 %	10.0 %	3.3 %	2.5 %	10.0 %	5.0 %	5.0 %		2.5 %	16.7 %	6.7 %	5.0 %	6.0 %
2	Other land	20.0 %	20.0 %	20.0 %	15.0 %	15.0 %	27.5 %	35.0 %	34.0 %	35.0 %	53.3 %	60.0 %	43.3 %	31.3 %
3	Both	2.5 %					2.5 %	5.0 %	2.0 %	2.5 %	3.3 %	3.3 %	3.3 %	2.1 %
4	Others	67.5 %	70.0 %	76.7 %	82.5 %	75.0 %	65.0 %	55.0 %	64.0 %	60.0 %	26.7 %	30.0 %	48.3 %	60.6 %
3	To loss of your land for irrigation facilities													
1	Not accept					2.5 %	10.0 %	5.0 %	2.0 %	5.0 %	3.3 %	6.7 %	1.7 %	2.9 %
2	Need compensation	25.0 %	30.0 %	26.7 %	22.5 %	25.0 %	17.5 %	37.5 %	34.0 %	40.0 %	70.0 %	50.0 %	41.7 %	34.4 %
3	No choice	7.5 %	10.0 %		5.0 %			7.5 %	8.0 %	5.0 %	3.3 %	16.7 %	11.7 %	6.5 %
4	No problem	65.0 %	57.5 %	73.3 %	72.5 %	70.0 %	70.0 %	50.0 %	56.0 %	50.0 %	23.3 %	26.7 %	45.0 %	55.4 %
	No idea	2.5 %	2.5 %											0.8 %
	If he/she chooses "2 Need compensation", what does he/she want to compensation?													
1	Money	7.5 %	5.0 %	3.3 %	5.0 %	5.0 %	5.0 %	5.0 %	4.0 %	2.5 %	10.0 %	3.3 %	3.3 %	4.8 %
2	Other land	15.0 %	22.5 %	23.3 %	17.5 %	20.0 %	12.5 %	40.0 %	30.0 %	35.0 %	56.7 %	50.0 %	36.7 %	29.4 %
3	Both	2.5 %					2.5 %	2.5 %	2.0 %	2.5 %	3.3 %		5.0 %	1.9 %
4	Others	75.0 %	72.5 %	73.3 %	77.5 %	75.0 %	80.0 %	52.5 %	64.0 %	60.0 %	30.0 %	46.7 %	55.0 %	64.0 %
	Do you think illegal to cultivate on reservoir and/or canal?													
1	YES	42.5 %	52.5 %	53.3 %	85.0 %	45.0 %	80.0 %	80.0 %	76.0 %	40.0 %	60.0 %	50.0 %	56.7 %	60.6 %
2	NO	57.5 %	47.5 %	46.7 %	15.0 %	55.0 %	20.0 %	20.0 %	24.0 %	60.0 %	40.0 %	50.0 %	43.3 %	39.4 %
	To a lower drinking water quality by application of fertilizer and chemicals													
1	Not accept	22.5 %	22.5 %	33.3 %	22.5 %	25.0 %	27.5 %	25.0 %	30.0 %	30.0 %	40.0 %	33.3 %	35.0 %	28.8 %
2	Need other drinking water source	35.0 %	30.0 %	23.3 %	42.5 %	27.5 %	35.0 %	32.5 %	34.0 %	32.5 %	30.0 %	40.0 %	26.7 %	32.3 %
3	No choice	2.5 %	5.0 %	3.3 %	2.5 %	5.0 %		10.0 %			10.0 %	6.7 %	16.7 %	5.4 %
4	No problem	40.0 %	42.5 %	40.0 %	32.5 %	42.5 %	37.5 %	32.5 %	36.0 %	37.5 %	20.0 %	20.0 %	21.7 %	33.5 %
<b>SECTION III</b>	<b>IRRIGATION, WATER MANAGEMENT &amp; FARMERS WATER USERS COMMUNITY (FWUC)</b>													
III-1	Source of irrigation water and method of irrigation to your paddy field?													
1	Only rainfall	95.0 %	90.0 %	100.0 %	100.0 %	80.0 %	70.0 %	87.5 %	100.0 %	100.0 %	50.0 %	100.0 %	96.7 %	90.0 %

**Table B3.2-1 Result of Household Survey (15/15)**

Question	Irrigation System & No. of Samples	Battambang			Moung Russey			Pursat			Boribo			Whole
		Vat Balat	Thmat Pong	Baot Sata	Prek Chik	Proloy Po	Ream Kon	Wat Loung	B. P. Ponley	Wat Chrea	Taram	Khvet	Lum Hach	
		40	40	30	40	40	40	40	50	40	30	30	60	
														480
2	Mainly rainfall but sometime canal water		5.0 %			17.5 %	22.5 %	12.5 %			50.0 %		3.3 %	8.3 %
3	Mainly from canal but rainfall too	5.0 %	5.0 %			2.5 %	7.5 %							1.7 %
	<b>Do you know the recent rice cultivation system "SRI"?</b>													
1	Yes, very well and interested	57.5 %	50.0 %	43.3 %	47.5 %	47.5 %	45.0 %	45.0 %	46.0 %	42.5 %	33.3 %	36.7 %	48.3 %	45.8 %
2	Yes, but not interested	5.0 %	2.5 %	13.3 %	2.5 %	5.0 %	2.5 %	7.5 %	8.0 %	5.0 %	10.0 %	6.7 %	15.0 %	7.1 %
3	No	37.5 %	47.5 %	43.3 %	50.0 %	47.5 %	52.5 %	47.5 %	46.0 %	52.5 %	56.7 %	56.7 %	36.7 %	47.1 %
	<b>"SRI" is a newly introduced program in Cambodia to get more paddy production by saving water and chemical fertilizer. Are you interested in "SRI"?</b>													
1	Yes	100.0 %	97.5 %	83.3 %	85.0 %	95.0 %	82.5 %	70.0 %	92.0 %	97.5 %	53.3 %	86.7 %	90.0 %	87.1 %
2	No		2.5 %	16.7 %	15.0 %	5.0 %	17.5 %	30.0 %	8.0 %	2.5 %	46.7 %	13.3 %	10.0 %	12.9 %
	<b>If you answer "No", why you are not interested in (plural answer)?</b>													
1	Never seen a farmer applying "SRI"			6.7 %	7.5 %	2.5 %	10.0 %	10.0 %	4.0 %	2.5 %	10.0 %		3.3 %	4.6 %
2	Not receive technical guidance about "SRI" yet		2.5 %	10.0 %	7.5 %	2.5 %	5.0 %	20.0 %	4.0 %		13.3 %	6.7 %	5.0 %	6.0 %
3	Not have a canal to control						2.5 %				23.3 %	6.7 %	1.7 %	2.3 %
<b>III-2</b>	<b>About FWUC</b>													
1	<b>Are you a member of FWUC?</b>													
1	Yes	27.5 %	32.5 %	6.7 %	2.5 %	7.5 %	5.0 %		4.0 %	5.0 %	6.7 %	16.7 %	8.3 %	10.0 %
2	No	42.5 %	50.0 %	40.0 %	50.0 %	62.5 %	72.5 %	57.5 %	48.0 %	45.0 %	40.0 %	33.3 %	38.3 %	48.5 %
3	Not know	30.0 %	17.5 %	53.3 %	47.5 %	30.0 %	22.5 %	42.5 %	48.0 %	50.0 %	53.3 %	50.0 %	53.3 %	41.5 %
2	<b>Do you know the name of FWUC you belong</b>													
1	Yes	25.0 %	32.5 %	6.7 %	2.5 %	2.5 %	2.5 %					16.7 %	8.3 %	7.9 %
2	No	62.5 %	62.5 %	83.3 %	72.5 %	90.0 %	80.0 %	90.0 %	86.0 %	75.0 %	73.3 %	33.3 %	38.3 %	70.0 %
3	Not know	12.5 %	5.0 %	10.0 %	25.0 %	7.5 %	17.5 %	10.0 %	14.0 %	25.0 %	23.3 %	50.0 %	53.3 %	21.9 %
3	<b>Do you know the name of FWUC chairman you belong</b>													
1	Yes	27.5 %	27.5 %	6.7 %	2.5 %	7.5 %	2.5 %				93.3 %			11.9 %
2	Not know	72.5 %	72.5 %	93.3 %	97.5 %	92.5 %	97.5 %	100.0 %	100.0 %	100.0 %	6.7 %	100.0 %	100.0 %	88.1 %
4	<b>Do you know the intended functions of FWUC</b>													
1	Yes	17.5 %	25.0 %	6.7 %	2.5 %	7.5 %	2.5 %		2.0 %		3.3 %			5.4 %
2	Not know	82.5 %	75.0 %	93.3 %	97.5 %	92.5 %	97.5 %	100.0 %	98.0 %	100.0 %	96.7 %	100.0 %	100.0 %	94.6 %
5	<b>Do you know the FWUC activities carried out in the last 1 year</b>													
1	Yes	20.0 %	30.0 %	6.7 %		5.0 %	2.5 %				3.3 %	3.3 %		5.6 %
2	Not know	80.0 %	70.0 %	93.3 %	100.0 %	95.0 %	97.5 %	100.0 %	100.0 %	100.0 %	96.7 %	96.7 %	100.0 %	94.4 %
6	<b>Did you attend the FWUC general members meeting of last year</b>													
1	Yes	25.0 %	25.0 %	6.7 %	2.5 %	7.5 %	2.5 %		2.0 %		3.3 %	6.7 %	5.0 %	7.1 %
2	No	62.5 %	72.5 %	86.7 %	95.0 %	90.0 %	87.5 %	97.5 %	94.0 %	85.0 %	76.7 %	73.3 %	83.3 %	84.2 %
3	Not held	12.5 %	2.5 %	6.7 %	2.5 %	2.5 %	10.0 %	2.5 %	4.0 %	15.0 %	20.0 %	20.0 %	11.7 %	8.8 %
7	<b>In what FWUC activities did you attend last year?: please specify</b>													
1	Yes	15.0 %	25.0 %	13.3 %	5.0 %	5.0 %	5.0 %		2.0 %	5.0 %	3.3 %	3.3 %	3.3 %	6.9 %
2	No	77.5 %	70.0 %	83.3 %	87.5 %	90.0 %	92.5 %	100.0 %	92.0 %	87.5 %	13.3 %	26.7 %	36.7 %	72.3 %
3	Not held	7.5 %	5.0 %	3.3 %	7.5 %	5.0 %	2.5 %		6.0 %	7.5 %	83.3 %	70.0 %	60.0 %	20.8 %
8	<b>Did you pay irrigation fee in last year, if yes how much?</b>													
1	Yes	22.5 %	20.0 %	3.3 %		2.5 %				2.5 %				4.2 %
2	No	70.0 %	62.5 %	83.3 %	100.0 %	92.5 %	92.5 %	80.0 %	88.0 %	82.5 %	70.0 %	70.0 %	80.0 %	81.5 %
3	Not fee charged	7.5 %	17.5 %	13.3 %		5.0 %	7.5 %	20.0 %	12.0 %	15.0 %	30.0 %	30.0 %	20.0 %	14.4 %
<b>SECTION IV FLOOD DAMAGE</b>														
1	<b>Do you suffer from flood damage?</b>													
1	Yes	42.5 %	60.0 %	63.3 %	35.0 %	55.0 %	70.0 %	50.0 %	4.0 %	12.5 %	10.0 %	10.0 %	8.3 %	33.8 %
2	No	57.5 %	40.0 %	36.7 %	65.0 %	45.0 %	30.0 %	50.0 %	96.0 %	87.5 %	90.0 %	90.0 %	91.7 %	66.3 %
	<b>How often do you suffer from flood in a year?</b>													
1	Once a year	30.0 %	42.5 %	30.0 %	27.5 %	20.0 %	42.5 %	42.5 %	2.0 %	5.0 %	10.0 %	6.7 %	3.3 %	21.0 %
2	Twice a year	5.0 %	5.0 %	23.3 %	7.5 %	15.0 %	10.0 %	2.5 %	2.0 %	5.0 %				5.8 %
3	3 times a year	2.5 %	7.5 %	3.3 %		7.5 %	7.5 %						1.7 %	2.5 %
4	4 times or more a year	2.5 %	5.0 %			12.5 %	10.0 %					3.3 %	3.3 %	3.1 %
5	2-3 YEARS ONE TIME	2.5 %		6.7 %				5.0 %		2.5 %				1.3 %
3	<b>How many days does one flood continues on average?</b>													
1	1 day				2.5 %	2.5 %	2.5 %	7.5 %				3.3 %	3.3 %	1.9 %
2	2 days	5.0 %	5.0 %	3.3 %	2.5 %	5.0 %	5.0 %	2.0 %			3.3 %	3.3 %		2.7 %
3	3 days	17.5 %	15.0 %	30.0 %	7.5 %	5.0 %	12.5 %	25.0 %			6.7 %	3.3 %		9.4 %
4	4 days or more	20.0 %	40.0 %	30.0 %	22.5 %	42.5 %	57.5 %	12.5 %	2.0 %	12.5 %		1.0 %	5.0 %	20.0 %
4	<b>How do the floods damage you?</b>													
1	Paddy	40.0 %	30.0 %	26.7 %	7.5 %	42.5 %	60.0 %	32.5 %	4.0 %	7.5 %	6.7 %	6.7 %	8.3 %	22.3 %
2	Vegetable Field		12.5 %	3.3 %	2.5 %			7.5 %		2.5 %	3.3 %			2.5 %
3	Household Goods		2.5 %	3.3 %						2.5 %				0.6 %
4	Fish													
5	Poultry	2.5 %						2.5 %						0.4 %
6	Large Livestock													
7	Family's Life		15.0 %	30.0 %	25.0 %	12.5 %	10.0 %	7.5 %			3.3 %			7.9 %
8	Others													

*Attachment*



## Questionnaire (for all interviewees)

**Note: SELECTION CRITERIA FOR QUESTIONNAIRE SURVEY**

Target farmers for the questionnaire survey are selected from 4 categories at each scheme described as below.

Category	Basic Cropping Pattern	Sample No.
With Irrigation		
Category A	Large-scale Farmers	10 farmers
Category B	Medium-scale Farmers	10 farmers
Category C	Small-scale Farmers	10 farmers
Without Irrigation		
Category D	Farmers' under rain-fed agriculture	10 farmers
		Total 40 farmers

40 farmers / scheme x 12 schemes = 480 schemes in total (average), number differs depending upon the scale of the system as instructed by JICA Study Team

		Sample No.	(        ) / Category (        ) (Q-1) / (Q-2)
Date (M/D/Y):	/  /		
Enumerator:		Team Leader:	
Province:	Battambang / Pursat Kampong Chhnang	Q-3	District:
River Basin	Battambang / Moug Russey Pursat / Boribo	Q-5	
Commune:		Q-6	Village:
			1 Paddy ( <i>slock slae</i> ) 2 Upland crop
FWUC		Q-9	FWUG

Sample No.: All questionnaires shall be attached sequential numbers, i.e. 001, 002, ---, 200.

Date (M/D/Y): Data format shall be written as "07/22/07" (Month: July /Date: 22nd /Year: 2007). This item is not necessarily given in the data summary.

Enumerator: Name of enumerator shall be written in block letters. This item is not necessarily given in the data summary.

Team Leader: Enter name of team leader after proofreading. This item is not necessarily given in the data summary.

FWUC / FWUG: If interviewee is a member of either FWUC and/or FWUG, specify the name in this column.

## PART 1 SOCIO-ECONOMY

### SECTION I GENERAL INFORMATION

- I-1 Name and age of interviewee Name  Q-11  
 Age  Q-12  
 I-2 Who is it?  Q-13  
 1 Male head of the household  
 2 Female head of the household  
 3 Oldest son of the household  
 4 Oldest daughter of the household  
 5 Other ( )

Note: 1-1. Write interviewee's name (full name in block letters). This item is not necessarily given in the data summary.  
 I-2 Circle a code number.

- I-3 Total number of household members  Q-14  
 I-4 Number of male household members  Q-15  
 I-5 Number of female household members  Q-16  
 I-6 Number of working aged members in the household (Household members of age 15 – 64)  
 Male  Q-17  
 Female  Q-18  
 Total  Q-19  
 I-7 Main activity of this household  Q-20

Note: Choose main activity of this household from codes below.

Main activity	Code	Remarks
Farmer	1	Own/rented land, and agricultural income is more than other one.
On-farm labor	2	Wage for labor work on farm is more than other income.
Non-farm labor	3	Wage for non-farm labor work is more than other income.
Salary worker	4	Salary is more than other work.
Private business	5	Income from private business is more than other work.
Others	6	Specify.

- I-8 Education Carrier of Interviewee  Q-21

Education: Education background shall be chosen from codes below.

for adult (>18 yr)	Code
No formal education	1
Drop-out at primary school	2
Graduate from primary school	3
Drop-out at junior high school	4
Graduate from junior high school	5
Drop-out at high school	6
Graduate from high school	7
More than high school	8

- I-9 Occupation of Household Members Other Than Respondent  
 ( ) please specify as wife, husband, child etc  Q-22  
 ( )  Q-23  
 ( )  Q-24  
 ( )  Q-25

Main occupation: Main occupation shall be chosen from codes below.

Main occupation	Code	Main occupation	Code
Farmer	1	Housekeeping (cooking, washing, child care, etc.)	6
On-farm labor	2	No job	7
Non-farm labor	3	Student	8
Salary worker	4	Child (below school age)	9
Private business	5	Others	10

\* Definition of Main Occupation: "A person who has more than 1 job, the work that most of his/ her working time is spent is regarded as a main occupation. In case, he/ she engages in only 1 job, it is regarded as a main occupation" (NIS, 1995)

**I-10 Member of village organization (husband)**

1  Q-26    2  Q-27    3  Q-28    4  Q-29    5  Q-30

Note: Choose village organization codes below which head of the family belong to. If there are other organizations, fill in the name.

Village organization	Code	Village organization	Code
Farmer's water users' community	1	Marketing group	7
Credit group by government	2	Youth group	8
Micro-credit group by NGO	3	Veteran group	9
Production group	4	Women's group	10
Religion group	5	Others (                                    )	11
Drinking water users' group	6		

**I-11 Member of village organization (wife)**

1  Q-31    2  Q-32    3  Q-33    4  Q-34    5  Q-35

Note: Choose village organizations codes below which housewife belong to. If there are other organizations, fill in the name.

Village organization	Code	Village organization	Code
Farmer's water users' community	1	Marketing group	7
Credit group by government	2	Youth group	8
Micro-credit group by NGO	3	Veteran group	9
Production group	4	Women's group	10
Religion group	5	Others (                                    )	11
Drinking water users' group	6		

**SECTION II LIVING CONDITION**

**II-1 Drinking water source**

	Main source	Code	Distance from your house	Code	Sufficiency	Code
Dry season	<input type="text"/>	Q-36	<input type="text"/> m	Q-37	<input type="text"/>	Q-38
Wet season	<input type="text"/>	Q-39	<input type="text"/> m	Q-40	<input type="text"/>	Q-41

Note: Choose water source for drinking water and its availability.

Water source	Code	Water source	Code
Piped	1	Spring/River	5
Tube pipe well	2	Bought	6
Dug well	3	Rain	7
Reservoir/ Pond	4	Others	8

Availability	Code	Availability	Code
Easy to obtain	1	Very difficult to obtain	3
Difficult to obtain	2		

**II-2 Water source for domestic use**

	Main source	Code	Distance from your house	Code	Sufficiency	Code
Dry season	<input type="text"/>	Q-42	<input type="text"/> m	Q-43	<input type="text"/>	Q-44
Wet season	<input type="text"/>	Q-45	<input type="text"/> m	Q-46	<input type="text"/>	Q-47

Note: Choose water source for domestic use and its availability.

Water source	Code	Water source	Code
Piped	1	Spring/River	5
Tube pipe well	2	Bought	6
Dug well	3	Rain	7
Reservoir/ Pond	4	Others	8

Availability	Code	Availability	Code
Easy to obtain	1	Very difficult to obtain	3
Difficult to obtain	2		

**II-3 Fuel source for cooking**

Importance	Source	Code	Availability	Code
1 Most important	<input type="text"/>	Q-48	<input type="text"/>	Q-49
2 Secondary importance	<input type="text"/>	Q-50	<input type="text"/>	Q-51

Note: Choose fuel source primary and secondary (supplemental), and its availability.

Fuel source	Code	Fuel source	Code
Firewood	1	Gas cylinder (LPG)	4
Kerosene	2	Electricity	5
Charcoal	3	Others	6

Availability	Code	Availability	Code
Easy to obtain	1	Very difficult to obtain	3
Difficult to obtain	2		

#### II-4 Fuel source for lightening

Importance	Source	Availability
1 Most important	<input type="text"/> Q-52	<input type="text"/> Q-53
2 Secondary importance	<input type="text"/> Q-54	<input type="text"/> Q-55

Note: Choose fuel source primary and secondary (supplemental), and its availability.

Fuel source	Code	Fuel source	Code
Firewood	1	Gas cylinder (LPG)	4
Kerosene	2	Electricity	5
Charcoal	3	Others	6

Availability	Code	Availability	Code
Easy to obtain	1	Very difficult to obtain	3
Difficult to obtain	2		

#### II-5 Facilities/machinery/equipment in your household (1 Yes / 2 No)

	No.		No.
1 Radio	<input type="text"/> Q-56	12 Electric Fan	<input type="text"/> Q-67
2 TV	<input type="text"/> Q-57	13 Refrigerator	<input type="text"/> Q-68
3 Bicycle	<input type="text"/> Q-58	14 Mosquito net	<input type="text"/> Q-69
4 Motorcycle	<input type="text"/> Q-59	15 Cellular Telephone	<input type="text"/> Q-70
5 Car	<input type="text"/> Q-60	16 Telephone	<input type="text"/> Q-71
6 Audio (CD/ cassette player)	<input type="text"/> Q-61	17 Weaving machine	<input type="text"/> Q-72
7 VCR	<input type="text"/> Q-62	18 Ox cart	<input type="text"/> Q-73
8 Row boat	<input type="text"/> Q-63	19 Water pump	<input type="text"/> Q-74
9 Boat with motor	<input type="text"/> Q-64	20 Chemical sprayer	<input type="text"/> Q-75
10 Tractor	<input type="text"/> Q-65	21 Others ( )	<input type="text"/> Q-76
11 Power generator	<input type="text"/> Q-66	22 Others ( )	<input type="text"/> Q-77

#### II-6 Residence

Q-78	Ownership	1 Owned (already paid) 2 Owned (under payment) 3 Lent 4 Borrowed
Q-79	Material	1 Cement and bricks 2 Palm leaves 3 Wood 4 Others ( )
Q-80	Type of House	1 Traditional 2 One-storied 3 Two-storied 4 Others ( )
Q-81	Number of rooms	
Q-82	Toilet	1 Yes 2 No
Q-83	Electrical Supply	1 Yes 2 No
Q-84	Piped Water Supply	1 Yes 2 No
Q-85	Gas Line Supply	1 Yes 2 No
Q-86	Land telephone line	1 Yes 2 No

#### II-7 Social Service

1. Health and medical service	
When you/ your family get/gets sick,	
Q-87	Where do you go? <input type="text"/> 1 Hospital 2 Clinic 3 Health center 4 Others ( )
Q-88	How do you go there? <input type="text"/> By 1 Walk 2 Bike taxi 3 Owned motor bike 4 Bicycle 5 Others ( )
Q-89	How long does it take to be there? <input type="text"/> Minutes

2. Reproductive Health

When you/ your wife delivers a baby,

**Q-90** where do you go?  1 Hospital 2 Clinic 3 Health center 4 TBA 5 Traditional Dr.  
6 Midwife 7 Others( )

**Q-91** how do you go there?  By 1 Walk 2 Bike taxi 3 Owned motor bike 4 Bicycle 5 Others ( )

**Q-92** how long does it take to be there?  Minutes

2. Social security service

**Q-93** Do you have any social security service/ insurance?  1 Yes 2 No

**II-8 Gender in Development**

1. Marriage

**Q-94** How old usually do women get married in your village?,  1 15-17 2 18-20 3 21-23 4 24-26 5 27-29 6 Older than 30

2. Daily activities

**Q-95** What are **FEMALE's** main activities in your village? (plural answers)  1 Housekeeping 2 Cooking 3 Farming 4 Handy crafting 5 Care of children/ elders 6 Care of livestock 7 Making Palm sugar 8 Others ( )

**Q-96** What are **MALE's** main activities in your village? (plural answers)  1 Housekeeping 2 Cooking 3 Farming 4 Handy crafting 5 Care of children/ elders 6 Care of livestock 7 Making Palm sugar 8 Others ( )

3. Income source

**Q-97** What are **FEMALE's** main cash income sources in your village? (plural answers)  1 Selling paddy 2 Working for other's field 3 Selling palm sugar 4 Selling handy craft 5 Working for a weaving factory 6 Working for bricks factory 7 Selling straw mat 8 Selling cotton/ silk 9 Others ( )

**Q-98** What are **MALE's** main cash income sources in your village? (plural answers)  1 Selling paddy 2 Working for other's field 3 Selling palm sugar 4 Selling handy craft 5 Working for a weaving factory 6 Working for bricks factory 7 Selling straw mat 8 Selling cotton/ silk 9 Others ( )

4. Discrimination

**Q-99** Is there any social discrimination against **women**?  1 Yes 2 No

**5. Women's Access/ Control on resources** (Write 1 if it is accessible/ controllable & 2 if it is not accessible/ controllable)

**(Q-100)**

	Water Source		Land		Farm land		Livestock	

\* Accessible: You have a right to work on. Controllable: You have a right to buy or rent.

**SECTION III INCOME AND EXPENDITURE**

**III-1 Cash income sources in last year (Last year: January 2006 – December 2006)**

1	Selling paddy/rice	riel/Yr	Q-101	9	Wage from temporary job out of farm	riel/Yr	Q-109
2	Selling vegetables	riel/Yr	Q-102	10	Private business (transportation, trading, shop, etc.)	riel/Yr	Q-110
3	Selling fruits	riel/Yr	Q-103	11	Remittance from family members	riel/Yr	Q-111
4	Selling palm sugar	riel/Yr	Q-104	12	Selling firewood/charcoal	riel/Yr	Q-112
5	Selling livestock, poultry & their products	riel/Yr	Q-105	13	Selling handicraft/ cottage industry products	riel/Yr	Q-113
6	Selling fishes	riel/Yr	Q-106	14	Selling forest products	riel/Yr	Q-114
7	Salary from permanent job	riel/Yr	Q-107	15	Others (Specify: Q-116)	riel/Yr	Q-115
8	Wage from temporary job on farm	riel/Yr	Q-108	16	Total	riel/Yr	Q-117

**Note:** Write cash income of this household in 2004 (total of one year). If the interviewee answer in US\$, convert to riel (US\$ = 4,000 riel).

**III-2 Expenditure for consumption (Last year: January 2006 – December 2006)**

1	Rice	riel/Yr	Q-118
2	Other foods	riel/Yr	Q-119
3	Health/ medicine	riel/Yr	Q-120
4	Education	riel/Yr	Q-121
5	Clothes	riel/Yr	Q-122
6	Fuel/Electricity	riel/Yr	Q-123
7	Transportation	riel/Yr	Q-124
8	Tax	riel/Yr	Q-125
9	Ceremony & ritual	riel/Yr	Q-126
10	Others	riel/Yr	Q-127
11	Total	riel/Yr	Q-128

**Note:** Write expenditure for consumption of this household in 2004. Total of expenditure should be less than total of income. If the interviewee answer in US\$, convert to riel (US\$ = 4,000 riel).

**III-3 Investment on productive and fixed assets in the last two year (January 2005 – December 2006)**

1	Livestock		
1-1	Chicken	Head(s)	Q-129
1-2	Ducks	Head(s)	Q-130
1-3	Cattle	Head(s)	Q-131
1-4	Water buffalo	Head(s)	Q-132
1-5	Pig	Head(s)	Q-133
1-6	Horse	Head(s)	Q-134
1-7	Goat	Head(s)	Q-135
1-8	Others ( Q-137)	Head(s)	Q-136
2	Housing (building/ maintenance)	Riel	Q-138
3	Private business	Riel	Q-139
4	Land	Riel	Q-140

**SECTION IV SAVINGS AND LOAN**

**IV-1 Savings of any type at present**

If family member(s) have savings, choose "Y" and choose type of the savings and purposes from the codes below. If the family member(s) do not have saving, choose "2" and fill in Q-190.

1 Yes 2 No	Q-141		Q-142		Q-143		Q-144		Q-145		Reason for no Saving Q-150
			Q-146		Q-147		Q-148		Q-149		

Source of savings	Code
Money in bank	1
Land	2
Livestock	3
Cash	4
Others	5

Purpose for savings	Code
For safety	1
Saving for future expenditure	2
Saving for emergency needs	3

Reason of no savings	Code
No idle money	1
Credit is available at anytime	2
Others	3

**IV-2 Loans and debts at present**

**[Note]** If the family member(s) have loan(s) and debt(s), choose "Yes" and choose the source of loan(s) and debt(s), write interest rate (per year, %), choose purpose for loan(s) and debt(s) and Collateral from code below and write amount of repayment per year. If the family member(s) do not have loan(s), choose "No".

1 Yes 2 No	Q-151		Q-152		Q-153		%/yr	Q-154		Q-155		Q-156		Riel/yr	Q-157
			Q-158		Q-159		%/yr	Q-160		Q-161		Q-162		Riel/yr	Q-163

Source of loans/debts	Code
Money lender	1
Friend/Relatives	2
Trader	3
NGO	4
Commercial bank	5
Rice miller	6
Credit scheme/project	7
Others (specify)	8

Purpose for loans/debts	Code	Purpose for loans/debts	Code
Seeds/fertilizers/agro-chemicals	1	Debt repayment	8
Farm equipment/tools	2	Ceremonial occasions	9
Animals	3	Business	10
Food	4	Reclamation/Rehabilitation of farm land	11
Assets	5	Building/repair of house	12
Land	6	Others	13
Children's education	7		

Collateral for loans/debts	Code	Collateral for loans/debts	Code
Nothing	1	Jewelry/gold	4
Land	2	Others	5
Crop products	3		

## PART 2 AGRICULTURE

### SECTION I LIVESTOCK AND FRUITS TREES

#### I-1 LIVESTOCK

Write number of each livestock possessed currently and choose codes for feed sufficiency from answer code.

	Number		Food sufficiency	
	Adult	Calf	Wet season	Dry season
1 Cows/ Oxen	<input type="text"/>	Q-164 <input type="text"/>	<input type="text"/>	Q-166 <input type="text"/>
2 Water buffalo	<input type="text"/>	Q-168 <input type="text"/>		Q-167 <input type="text"/>
3 Goat/ Sheep	<input type="text"/>	Q-170 <input type="text"/>	<input type="text"/>	Q-172 <input type="text"/>
4 Swine	<input type="text"/>	Q-174 <input type="text"/>		Q-175 <input type="text"/>
5 Chicken	<input type="text"/>	Q-176 <input type="text"/>		Q-177 <input type="text"/>
6 Duck	<input type="text"/>	Q-178 <input type="text"/>		Q-179 <input type="text"/>

Answer code & answer for food sufficiency

1. Sufficient	3. Short
2. Just enough	4. Very short

#### I-2 FRUITS TREES

Indicate estimated numbers of sugar palm and major three fruit trees possessed by the interviewee.

	No. of trees		No. of trees
1 Sugar palm	<input type="text"/>	Q-180 4 (specify	Q-184 <input type="text"/>
2 Banana	<input type="text"/>	Q-181 5 (specify	Q-186 <input type="text"/>
3 Mango	<input type="text"/>	Q-182 6 (specify	Q-188 <input type="text"/>

### SECTION II LAND HOLDING

#### II-1 Land holding (only for farm land) by a family

Write area of farmland by item. "Land owned" + "Land rented from others" – "Land leased to others" = "Land operated". If the household is categorized as complete landless labor farmer, all the items must be "0 ha". Please differentiate irrigated paddy field by gravity (irrigation canal) from irrigated paddy field by pumping. If both gravity and pumping irrigation are employed, please answer to 3.

	Land owned	Land rented from others	Land leased to others	Land operated
1 Irrigated paddy field (gravity only)	<input type="text"/> ha Q-189	<input type="text"/> ha Q-190	<input type="text"/> ha Q-191	<input type="text"/> ha Q-192
2 Irrigated paddy field (pump irrigation only)	<input type="text"/> ha Q-193	<input type="text"/> ha Q-194	<input type="text"/> ha Q-195	<input type="text"/> ha Q-196
3 Irrigated paddy field (gravity + pump irrigated)	<input type="text"/> ha Q-197	<input type="text"/> ha Q-198	<input type="text"/> ha Q-199	<input type="text"/> ha Q-200
4 Rainfed paddy field	<input type="text"/> ha Q-201	<input type="text"/> ha Q-202	<input type="text"/> ha Q-203	<input type="text"/> ha Q-204
5 Upland for field crop	<input type="text"/> ha Q-205	<input type="text"/> ha Q-206	<input type="text"/> ha Q-207	<input type="text"/> ha Q-208
6 Upland for tree crop	<input type="text"/> ha Q-209	<input type="text"/> ha Q-210	<input type="text"/> ha Q-211	<input type="text"/> ha Q-212
7 Total	<input type="text"/> ha Q-213	<input type="text"/> ha Q-214	<input type="text"/> ha Q-215	<input type="text"/> ha Q-216

#### II-2 Land holding status (fill in answer code)

The categorization of the land holding status shall be chosen from the codes shown in Questionnaire. The evaluation of the land holding status shall be chosen from the codes below.

Q-217		
1 Owner cultivator	2 Owner cum sharecropper	3 Sharecropper
4 Owner cum tenant	5 Tenant	6 Not operating any farm land



**II-3 Condition for land tenure**

Write land rental charge and choose the codes for responsibility to pay production cost.

**1. Land rental charge**

		Rental charge	Production cost born by
1	In cash	Irrigated paddy field <input type="text"/> riel/ha/season Q-218	<input type="text"/> Q-219
		Rainfed paddy field <input type="text"/> riel/ha/season Q-220	<input type="text"/> Q-221
2	In kind	Irrigated paddy field <input type="text"/> % of harvest Q-222	<input type="text"/> Q-223
		Rainfed paddy field <input type="text"/> % of harvest Q-224	<input type="text"/> Q-225
4	Others	<input type="text"/> Specify: <input type="text"/>	<input type="text"/> Q-226

Note: Answer and answer code: for "production cost born by" & "decision maker"

1 Land owner	2 Tenant/share cropper	3 Both	4 Other
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**SECTION III CROPPED AREA & PRODUCTION (Crop Year 2005/2006)**

**III-1 Cropped Area & Production**

Write cropped area & production by land use category for last cropping season (2005/2006).

Crop		Early wet season	Wet season	Dry season
<b>Paddy Field</b>				
1	Irrigated paddy	Cropped area <input type="text"/> ha Q-227	<input type="text"/> ha Q-228	<input type="text"/> ha Q-229
		Production <input type="text"/> kg Q-230	<input type="text"/> kg Q-231	<input type="text"/> kg Q-232
2	Rainfed paddy	Cropped area <input type="text"/>	<input type="text"/> ha Q-233	
		Production <input type="text"/>	<input type="text"/> kg Q-234	
3	q-235 (specify)	Cropped area <input type="text"/> ha Q-236	<input type="text"/> ha Q-237	<input type="text"/> ha Q-238
4	q-239 (specify)	Cropped area <input type="text"/> ha Q-240	<input type="text"/> ha Q-241	<input type="text"/> ha Q-242
<b>Upland Field</b>				
1	q-243 (specify)	Cropped area <input type="text"/> ha Q-244	<input type="text"/> ha Q-245	<input type="text"/> ha Q-246
3	q- (specify)	Cropped area <input type="text"/> ha Q-	<input type="text"/> ha Q-	<input type="text"/> ha Q-

**III-2 Cropping pattern (from sowing to harvest in crop year 2005/2006): nursery ---- ; planting ○ ; harvest X**

Illustrate cropping pattern in a spread sheet indicate as follows:

Land Use Category	Crop	Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Oct	Nov	Dec
Irrigated paddy field (Q-247, Q-248 & Q-249)	1st rice												
	2nd rice												
	3rd rice												
	Others (specify)												
Rainfed paddy field (Q-250, Q-251 & Q-252)	rice												
	Others (specify)												
Upland field & (Q-253 Q-254)	(specify)												
	(specify)												

**III-3 Reason for fallow**

If the household leave his farmland fallow for some period, please choose reasons by the answer code given.

1 Wet Season  Q-255      2 Dry season  Q-256

1 Labor shortage (busy for other works, owner became sick, etc.)	4 Flood/inundation
2 Working capital shortage	5 Others (specify)
3 Water shortage	

**SECTION IV FARMING PRACTICES (practices adopted by interviewee in last year)**

Write responses of interviewee by specifying or by answer code. Please ask reasons for selection of rice varieties.

**IV-1 Rice**

Variety 

Early wet season	Q-257 (specify)
Dry season	Q-259 (specify)

Wet season	Q-258 (specify)
<input type="text"/>	

Reasons for selection of the variety (specify)  Q-260

Seed source  Q-261 (fill in answer code)

Answering code

1. Own products	2. Exchange with others	3. Procured at local market	4. Certified seed purchased	5. Other (specify)
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Seed replacement  Q-262 (fill in answer code)

Answering code	1. once per 3 croppings	2. once 4 ~ 6 croppings	3. once > 6 croppings
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Land preparation  Q-263 (fill in answer code)

Answering code	1. Draft animal	2. Machinery	3. Manual
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Fertilizer doses per season

Urea (kg/ha)	<input style="width: 80%;" type="text"/>	Q-264	Manure/compost (kg/ha)	<input style="width: 80%;" type="text"/>	Q-267
DAP (kg/ha)	<input style="width: 80%;" type="text"/>	Q-265	Others (specify;kg/ha)	<input style="width: 80%;" type="text"/>	Q-268
15-15-15 (kg/ha)	<input style="width: 80%;" type="text"/>	Q-266	Others (specify;kg/ha)	<input style="width: 80%;" type="text"/>	Q-

No. of plants per hill in transplant in wet season	<input style="width: 80%;" type="text"/>	Q-269	No. of plants per hill in transplant in dry season	<input style="width: 80%;" type="text"/>	Q-270
Age of seedlings for transplanting in wet season	<input style="width: 80%;" type="text"/>	Q-271	Age of seedlings for transplanting in dry season	<input style="width: 80%;" type="text"/>	Q-272
Transplanting method in wet season	<input style="width: 80%;" type="text"/>	Q-273	Transplanting method in dry season	<input style="width: 80%;" type="text"/>	Q-274

**Answering code for Q-306 & 307**

1. Regular planting	2. Random planting
---------------------	--------------------

**IV-2 Other crops**

Seed source/upland crops, if cultivated  Q-275 (Please select from answer code below)

1. Own products	2. Exchange with others	3. Procured at local market	4. Certified seed purchased	5. Other (specify)
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Seed source/vegetables, if cultivated  Q-276(Please select from answer code below)

1. Own products	2. Exchange with others	3. Procured at local market	4. Certified seed purchased	5. Other (specify)
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**SECTION V PRODUCTION (crop year 2005/2006)**

**V-1 Crop Production**

Note: "Production" – self-consumption = "Sold Production". The "Price" shall be average of the year.

Commodity		Production		Sold product		Price	
1	Irrigated paddy (early wet season)	<input type="text"/>	kg Q-277	Kind: <input type="text"/>	kg Q-278	<input type="text"/>	riel/kg Q-280
2	Irrigated paddy (wet season)	<input type="text"/>	kg Q-281	Kind: <input type="text"/>	kg Q-282	<input type="text"/>	riel/kg Q-284
3	Irrigated paddy (dry season)	<input type="text"/>	kg Q-285	Kind: <input type="text"/>	kg Q-286	<input type="text"/>	riel/kg Q-288
4	Rainfed paddy	<input type="text"/>	kg Q-289	Kind: <input type="text"/>	kg Q-290	<input type="text"/>	riel/kg Q-292
5	Fruits	<input type="text"/>	kg Q-293	<input type="text"/>	kg Q-294	<input type="text"/>	riel/kg Q-295
6	Sugar Palm	<input type="text"/>	kg Q-297	Kind: <input type="text"/>	kg Q-298	<input type="text"/>	riel/kg Q-300
7	Others (Q-301; specify)	<input type="text"/>	kg Q-302	<input type="text"/>	kg Q-303	<input type="text"/>	riel/kg Q-304
8	Others (Q-305; specify)	<input type="text"/>	kg Q-306	<input type="text"/>	kg Q-307	<input type="text"/>	riel/kg Q-308
9	Others (Q-309; specify)	<input type="text"/>	kg Q-310	<input type="text"/>	kg Q-311	<input type="text"/>	riel/kg Q-312

**V-2 Livestock & Fish**

Note: Write number of livestock/poultry sold in last year, unit prices and income.

Livestock/Fish	Sold product in last year		Price (riel/unit)		Income	
1 Cow	<input type="text"/>	(no.) Q-313	<input type="text"/>	riel Q-314	<input type="text"/>	riel Q-315
2 Cattle	<input type="text"/>	(no.) Q-316	<input type="text"/>	riel Q-317	<input type="text"/>	riel Q-318
3 Water Buffalo	<input type="text"/>	(no.) Q-319	<input type="text"/>	riel Q-320	<input type="text"/>	riel Q-321
4 Swine/Pig	<input type="text"/>	(no.) Q-322	<input type="text"/>	riel Q-323	<input type="text"/>	riel Q-324
5 Poultry	<input type="text"/>	(no.) Q-325	<input type="text"/>	riel Q-326	<input type="text"/>	riel Q-327
6 Egg	<input type="text"/>	kg Q-328	<input type="text"/>	riel/kg Q-329	<input type="text"/>	riel Q-330
7 Fish	<input type="text"/>	kg Q-331	<input type="text"/>	riel/kg Q-332	<input type="text"/>	riel Q-333

**V-3 Food condition/ availability**

Note: The food condition/ availability shall be chosen from the codes given in Questionnaire.

Condition		Condition	
1 Rice	<input type="text"/>	Q-334	5 Vegetables <input type="text"/>
2 Other cereals	<input type="text"/>	Q-335	6 Meat <input type="text"/>
3 Roots and tuber crops	<input type="text"/>	Q-336	7 Fish <input type="text"/>
4 Beans	<input type="text"/>	Q-337	Others( <input type="text"/> Q-341) <input type="text"/>
Volume of rice purchased in last one year (kg)		<input type="text"/>	Q-342

Note: Answer & answer code

1. Own harvest/ product exceed the household demand	3. Purchased (or exchanged) to meet the household demand
2. Own harvest/ product is just enough to the household demand	4. Insufficient

**SECTION VI POST-HARVEST, PROCESSING AND MARKETING**

**VI-1 Post-harvest operation of rice**

[Note]: Write method and its ownership (Own/ Borrow/ Cooperative) if interviewee uses it, and its charge for borrowing. The codes indicated in Questionnaire shall be chosen for each processing. Write unit for borrowing charges, e.g. riel/ time, riel/hour or riel/day. In case of rice milling cost, indicate who receive rice bran.

Operation	Method	Ownership	Charge in case of borrowing
Threshing	<input type="text"/> Q-343	<input type="text"/> Q-344	<input type="text"/> Q-345
Drying	<input type="text"/> Q-346	<input type="text"/> Q-347	<input type="text"/> Q-348
Cleaning	<input type="text"/> Q-349	<input type="text"/> Q-350	<input type="text"/> Q-351
Rice milling cost	In case rice bran received by miller		<input type="text"/> riel/ton Q-352
	In case rice bran received by interviewee		<input type="text"/> riel/ton Q-352

Method						Ownership	
Threshing	Code	Drying	Code	Cleaning	Code	Ownership	Code
Engine thresher	1	Dryer (machine)	1	Engine winnower	1	Own	1
Pedal thresher	2	Sun drying	2	Manual winnower	2	Borrowed	2
Manual threshing	3		3	Manual without winnower	3	Cooperative	3

**VI-2 Storage and post-harvest losses of rice**

Write means of storage of rice. The kind of container shall be chosen from the codes given in Questionnaire. Use of fumigant answer by code for yes or no.

Product	Kind of container	Maximum storage period
Paddy	<input type="text"/> Q-353	<input type="text"/> months Q-354
Rice	<input type="text"/> Q-355	<input type="text"/> months Q-356
Use of fumigant	1. Yes 2. No	Q-357

Bag	Code 1	Bamboo basket	Code 2	Wooden box	Code 3	Others	Code 4
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**VI-3 Post-harvest losses of rice**

Choose the two (2) dominant post-harvest losses on the processing from the codes given in Questionnaire and write roughly estimated total post-harvest losses in % of total products.

Most dominant loss  Q-358 2<sup>nd</sup> dominant losses  Q-359 Total losses  % Q-360

During harvesting	Code 1	At threshing	Code 2	At drying	Code 3
At Cleaning	Code 4	At storage	Code 5	At other time (specify)	Code 6

**VI-4 Marketing of rice**

Indicate marketing timing of rice and roughly estimated proportion (%) to the total volumes of rice sold in according to the question. Forms of sold products (dry unhusked rice/paddy; milled rice etc) and marketing destination (to whom sell products) by the codes given in Questionnaire.

Timing	1. Just after harvest	2. When cash is needed	3. When price is high
% of total sold	<input type="text"/>	<input type="text"/>	<input type="text"/>
	% Q-361	% Q-362	% Q-363
Sold product	1. Field dried paddy	2. Sun dried paddy	3. Milled rice
	<input type="text"/>	<input type="text"/>	<input type="text"/> Q-364
Destination	1. Rice miller in village	2. Rice miller in commune center	3. Rice miller in district center
	<input type="text"/>	<input type="text"/>	<input type="text"/> Q-365
	4. Collector/middleman	5. Local market	6. Others (specify)
	<input type="text"/>	<input type="text"/>	<input type="text"/>

**VI-5 Marketing of other products**

Indicate marketing destination of other products by choosing the codes given in Questionnaire.

Crop	Fill in answer code	Answer code & answer
Vegetable	<input type="text"/> Q-366	1. Market in village
Field Crops	<input type="text"/> Q-367	2. Market in commune center
Vegetables	<input type="text"/> Q-368	3. Market in district center
Livestock	<input type="text"/> Q-369	4. Collector/middleman
Fish	<input type="text"/> Q-370	5. Other (specify)

**SECTION VII AGRICULTURAL SUPPORT SERVICES**

Reponses shall be chosen from the codes given in Questionnaire.

**VII-1 Extension services**

Question	Answer code & answer			
Visit of extension worker	1. once per < 2 weeks	2. once per 2 weeks~1 month	3. Seldom visited	<input type="text"/> Q-371
Technical capability of extension workers	1. Sufficient	2. Not sufficient	3. No services provided	<input type="text"/> Q-372
Are you satisfied with current extension services	1. Satisfied	2. Not satisfied	3. No services provided	<input type="text"/> Q-373
What kind of extension services are needed ? (specify)	<input type="text"/>			Q-374

**VII-2 Rice seed supply**

Question	Answer code & answer			
Procurement of wanted seeds	1. Easy	2. Difficult	3. Not possible	<input type="text"/> Q-375
Procurement of certified/quality seeds	1. Easy	2. Difficult	3. Not possible	<input type="text"/> Q-376
Seed supply timing	1. In time	2. Delayed	3. Not obtained	<input type="text"/> Q-377
Quality seed prices	1. Too expensive	2. Acceptable	3. Not purchased	<input type="text"/> Q-378

**VII-3 Farm inputs supply**

Question	Answer code & answer			
Procurement of wanted fertilizer	1. Easy	2. Difficult	3. Not possible	<input type="text"/> Q-379
Fertilizer supply timing	1. In time	2. Delayed	3. Not obtained	<input type="text"/> Q-380
Fertilizer prices	1. Too expensive	2. Acceptable	3. Not purchased	<input type="text"/> Q-381

**VII-4 Farm credit scheme by bank, project & NGO**

Question	Answer code & answer			
Access to farm credit scheme	1. Easy	2. Difficult	3. Not possible	<input type="text"/> Q-382
Timing of provision	1. In time	2. Delayed	3. Not provided	<input type="text"/> Q-383
Amount of credit	1. Sufficient	2. Not sufficient	3. Not provided	<input type="text"/> Q-384
Procedures for credit application	1. Easy	2. Difficult	3. Not possible	<input type="text"/> Q-385

**SECTION VIII FARMING CONSTRAINTS AND IMPROVEMENT**

**VIII-1 Farming constraints (agronomic & farm management)**

Ask about agronomic and farming constraints to the interviewee and indicate up to 4 constraints (maximum) in order of seriousness by consulting the answer codes given in Questionnaire.

**What are serious agronomic & farm management constraints for farming ? (select plural answer)**

1. Most serious  2. 2<sup>nd</sup> serious  3<sup>rd</sup> serious  4<sup>th</sup> serious

Note

Answer and answer code

1	Low yield of crops (paddy)	9	Difficulty for obtaining quality seeds
2	Crop losses due to pest & disease	10	Difficulty for purchasing fertilizers
3	Weed problem	11	Expensive farm inputs
4	Crop losses due to wild animal	12	Poor soil conditions
5	Difficulty for hiring draft animal/machinery	13	Marketing problems of products
6	Labor shortage	14	Lack of farm credit
7	Insufficient extension services	15	Others (specify)
8	Shortage of farming capital	16	Others (specify)

**VIII-2 Farming constraints (physical)**

Ask about physical constraints for farming to the interviewee and indicate up to 3 constraints (maximum) in order of seriousness by consulting the answer codes given in Questionnaire.

**What are serious physical constraints for farming ? (select plural answer)**

1. Most serious constraints  2. 2<sup>nd</sup> serious constraints  3<sup>rd</sup> serious constraints

Note

Answer and answer code

1	Irrigation water shortage in wet season	6	Lack of transportation means
2	Irrigation water shortage in dry season	7	Leveling problem of paddy field
3	Inundation/flooding	8	Others (specify)
4	Drainage problem	9	Others (specify)
5	Lack of farm road	10	Others (specify)

**VIII-3 Marketing constraints**

Ask about marketing constraints to the interviewee and indicate up to 3 constraints (maximum) in order of seriousness by consulting the answer codes given in Questionnaire.

1. Most serious constraints  2. 2<sup>nd</sup> serious constraints  3<sup>rd</sup> serious constraints

Answer and answer code

1	Unstable market prices of paddy/rice	7	Unstable market prices of livestock
2	Low market prices of paddy/rice	8	Low market prices of livestock
3	Limitation of market of paddy/rice	9	Limitation of market of livestock
4	Unstable market prices of other crops	10	Lack of or poor farm to market road
5	Low market prices of other crops	11	Others (specify)
6	Limitation of market of other crops	12	Others (specify)

**VIII-4 Reasons for limited productivity of crops in the rice field of interviewee (not specific to last year)**

Ask reasons for limited (low) productivity of crops in the rice fields of the interviewee and indicate up to 3 constraints (maximum) in order of seriousness by consulting the answer codes given in Questionnaire. Reasons should not be specific to last year but general problems faced by the interviewee.

1. Most serious constraints  2. 2<sup>nd</sup> serious constraints  3<sup>rd</sup> serious constraints

Answer and answer code

1 Drought in wet season	7 Damages caused by wild animal (rat)
2 Water shortage in dry season	8 Poor drainage
3 Shortage of farming capital	9 Flooding/inundation
4 Poor seed quality	10 Inadequate farming technologies
5 Poor soil	11 Damages caused by pest & disease
6 Limited application of fertilizer	12 Others (specify)

**VIII-5 Activities/practices to improve rice productivity implemented by the interviewee in the past 3 years (plural answer)**

Ask activities or practices carried out to improve rice productivity by the interviewee in the past 3 years by consulting the answer codes given in Questionnaire. Indicate all activities/practices implemented.

1.  2.  3.  4.

Answer and answer code

1 Increased fertilization doses	6 Started to use water pump for irrigation
2 Applied of compost/manure	7 Improved farming practices
3 Used quality seed (local variety)	8 Improved post-harvest practices
4 Used quality seed (high yielding variety)	9 Changed marketing methods
5 Constructed of farm pond	10 Others (specify)

**VIII-6 Necessary activities to improve rice productivity in the field of the interviewee (farming & farm management; plural answer)**

Ask farming or farm management activities or practices necessary for the improvement of rice productivity in the field of interviewee by consulting the answer codes given in Questionnaire. Indicate up to 4 activities/practices required (maximum) in order of degree of necessity.

1. Most required  2. 2<sup>nd</sup> required  3<sup>rd</sup> required  4<sup>th</sup> required

Answer and answer code

1 Improvement of farming practices	7 Intensive weeding
2 Use of quality seed (local variety)	8 Formation/strengthening of farmers organization
3 Use of quality seed (high yielding variety)	9 Others (specify: )
4 Use of adequate doses of fertilizer	10 Others (specify: )
5 Improved leveling of paddy field	11 Others (specify: )
6 Planting at proper time	12 Others (specify: )

**VIII-7 Necessary physical works to improve rice productivity in the field of the interviewee (plural answer)**

Note: Ask physical works necessary for the improvement of rice productivity in the field of interviewee by consulting the answer codes given in Questionnaire. Indicate up to 3 works required (maximum) in order of degree of necessity.

1. Most required  2. 2<sup>nd</sup> required  3<sup>rd</sup> required  4<sup>th</sup> required

Answer and answer code

1	Irrigation water supply for wet season	7	Others (specify)
2	Irrigation water supply for dry season	8	Others (specify)
3	Mitigation of inundation/flooding	9	Others (specify)
4	Drainage improvement	10	Others (specify)

### SECTION IX LIVESTOCK CONSTRAINTS

Ask livestock constraints to the interviewee by consulting the answer codes given in Questionnaire. Indicate up to 3 constraints in order of degree of seriousness.

1. Most serious constraints  2. 2<sup>nd</sup> serious constraints  3<sup>rd</sup> serious constraints

Answer and answer code

1	Low productivity	6	Insufficient veterinary services
2	Shortage of feed	7	Insufficient extension services
3	Low or unstable market prices	8	Difficulty in obtaining good breed
4	Market availability	9	Others (specify)
5	Losses due to diseases	10	Others (specify)

### SECTION X EXPECTATIONS

Ask expectations of the interviewee on agronomic & farm management, farming system, physical aspects. And agricultural support services by consulting the answer codes given in Questionnaire. Indicate up to 3 responses in order of degree of expectation or requirement.

#### X-1 Farming (agronomic & farm management)

1. Most required  2. 2<sup>nd</sup> required  3<sup>rd</sup> required

Answer and answer code

1	Productivity improvement of wet season rice	6	Increasing livestock holding size & production
2	Productivity improvement of dry season rice	7	Increasing poultry holding size & production
3	Productivity improvement of field crops	8	Strengthening or formation of farmers organizations
4	Productivity improvement of vegetables	9	Improvement of post-harvest operation
5	Productivity improvement of livestock/poultry	10	Others (specify)

#### X-2 Farming (farming system)

1. Primarily intended  2. 2<sup>nd</sup> intended  3<sup>rd</sup> intended

1	Double cropping of rice	3	Multiple farming (crop + livestock etc.)
2	Stable single cropping of rice	4	Crop diversification

#### X-3 Farming (physical)

1. Most required  2. 2<sup>nd</sup> required  3<sup>rd</sup> required

Answer and answer code

1	Adequate (volume/timing) irrigation water supply in wet season	6	Drainage improvement
2	Adequate (volume/timing) irrigation water supply in dry season	7	Leveling of paddy field
3	Mitigation of inundation & flooding	8	Others (specify)
4	Construction/rehabilitation of farm road	9	Others (specify)
5	Construction/rehabilitation of farm to market road	10	Others (specify)



**X-4 Agricultural support services**

1. Most required Q-423 2. 2<sup>nd</sup> required Q-424 3<sup>rd</sup> required Q-425

Answer and answer code

1	Field Extension services (demonstration / field guidance)	6	Provision of market information
2	Provision of quality seed	7	Provision of farm credit
3	Farmer training (technical & host-harvest operation)	8	Provision of fertilizer
4	Farmer training (organization, marketing, farm management)	9	Others (specify)
5	Support to organize farmers	10	Others (specify)

**SECTION XI PARTICIPATION IN AGRICULTURAL SUPPORT/PROJECT ACTIVITIES IN THE PAST**

Please tell us about your participation or involvement in agricultural support or project activities in the past 3 years

	Activities/Project/Program	Year	Implementation/Support Organization	
1.	Q-426	Q-427	Q-428	
2.	Q-429	Q-430	Q-431	
3.	Q-432	Q-433	Q-434	
4.	Q-435	Q-436	Q-437	
5.	Q-438	Q-439	Q-440	
6.	Q-441	Q-442	Q-443	

## **PART 3 IRRIGATION/DRAINAGE & WATER MANAGEMENT**

### **SECTION I PARTICIPATORY AWARENESS LEVEL FOR THIS PROJECT**

**Note:** Choose or write about participatory awareness level for this project. If the interviewee chooses "No", write its reason.

- |   |  |   |       |
|---|--|---|-------|
| 1 | To participate to construction of on-farm irrigation facilities                        |   |       |
|   | Construction works (Earthworks, concreting-works: small bridge, lining of canal, etc.) | <input type="text" value="Y / N"/>      | Q-444 |
|   | If "No", what is the reason?   | <input type="text"/>                    | Q-445 |
|   | Carrying works of construction materials   | <input type="text" value="Y / N"/>      | Q-446 |
|   | If "No", what is the reason?   | <input type="text"/>                    | Q-447 |
|   | Assistance works (measurement, etc.)   | <input type="text" value="Y / N"/>      | Q-448 |
|   | If "No", what is the reason?   | <input type="text"/>                    | Q-449 |
|   | Sharing the construction cost (payment by installments in long term)                   | <input type="text" value="Y / N"/>      | Q-450 |
|   | If "No", what is the reason?   | <input type="text"/>                    | Q-451 |
|   | Donation of local materials for construction (gravel, ballast, sand, etc.)             | <input type="text" value="Y / N"/>      | Q-452 |
|   | If "No", what is the reason?   | <input type="text"/>                    | Q-453 |
|   | Donation of equipment for construction works (spade, shovel, etc.)                     | <input type="text" value="Y / N"/>      | Q-454 |
|   | If "No", what is the reason?   | <input type="text"/>                    | Q-455 |
|   | Donation of draft animals (cow, horse, etc.)   | <input type="text" value="Y / N"/>      | Q-456 |
|   | If "No", what is the reason?   | <input type="text"/>                    | Q-457 |
| 2 | To be a member of FWUC   | <input type="text" value="Y / N"/>      | Q-458 |
|   | If "No", what is the reason?   | <input type="text"/>                    | Q-459 |
| 3 | To participate in FWUC meeting   | <input type="text" value="Y / N"/>      | Q-460 |
|   | If "No", what is the reason?   | <input type="text"/>                    | Q-461 |
| 4 | To pay water charge by cash  | <input type="text"/>                    | Q-462 |
|   | If "Yes", how much can you pay per year?   | <input type="text" value="riell/year"/> | Q-463 |
|   | If "No", could you pay it by crops (rice, vegetable, fruit, etc)                       | <input type="text" value="Y / N"/>      | Q-464 |
|   | If "No", what is the reason?   | <input type="text"/>                    | Q-465 |
| 5 | To pay member fee of FWUC  | <input type="text" value="Y / N"/>      | Q-466 |
|   | If Yes, how much can you pay per year?   | <input type="text" value="riell/year"/> | Q-467 |
|   | If "No", could you pay it by crops (rice, vegetable, fruit, etc)                       | <input type="text" value="Y / N"/>      | Q-468 |
|   | If "No", what is the reason?   | <input type="text"/>                    | Q-469 |
| 6 | To participate to maintenance of irrigation facilities                                 |   |       |
|   | Desilting  | <input type="text" value="Y / N"/>      | Q-470 |
|   | If "No", what is the reason?   | <input type="text"/>                    | Q-471 |
|   | Weeding  | <input type="text" value="Y / N"/>      | Q-472 |
|   | If "No", what is the reason?   | <input type="text"/>                    | Q-473 |
|   | Repairing  | <input type="text" value="Y / N"/>      | Q-474 |
|   | If "No", what is the reason?   | <input type="text"/>                    | Q-475 |
| 7 | To participate to operation of irrigation facilities                                   |   |       |
|   | Gate operation   | <input type="text" value="Y / N"/>      | Q-476 |
|   | If "No", what is the reason?   | <input type="text"/>                    | Q-477 |
|   | Water distribution   | <input type="text" value="Y / N"/>      | Q-478 |
|   | If "No", what is the reason?   | <input type="text"/>                    | Q-479 |

**SECTION II            NEGATIVE EFFECT**

**Note:** Choose negative effect specified by the interviewee. The question XIII-1 is only for farmer who cultivate land on reservoir. As the project can't promise to compensate at this moment, do not explain to farmer to compensate for their loss.

**Note:** 1-3: If interviewee chooses "Not accept", write its reason. If interviewee chooses "Need compensation", choose their request for compensation. 4: If interviewee chooses "Not accept", write its reason.

1 To a deeper inundation depth (If this farmer plant on reservoir area)	1 Not accept      2 Need compensation      3 No choice      4 No problem	Q-480
If he/she chooses "1 Not accepts", write reason of it.	Reason:	Q-481
If he/she chooses "2 Need compensation", what does he/she want to compensation?	1 Money            2 Other land            3 Both            4 Others	Q-482
2 To loss of present cultivation on reservoir area and/or canal	1 Not accept      2 Need compensation      3 No choice      4 No problem	Q-483
If he/she chooses "1 Not accept", write reason of it.	Reason:	Q-484
If he/she chooses "2 Need compensation", what does he/she want to compensation?	1 Money            2 Other land            3 Both            4 Others	Q-485
3 To loss of your land for irrigation facilities	1 Not accept      2 Need compensation      3 No choice      4 No problem	Q-486
If he/she chooses "1 Not accept", write reason of it.	Reason:	Q-487
If he/she chooses "2 Need compensation", what does he/she want to compensation?	1 Money            2 Other land            3 Both            4 Others	Q-488
Do you think illegal to cultivate on reservoir and/or canal?	1 Yes            2 No	Q-489
4 To a lower drinking water quality by application of fertilizer and chemicals	1 Not accept      2 Need other drinking water source 3 No choice      4 No problem	Q-490
If he/she chooses "1 Not accept", write reason of it.	Reason:	Q-491

**SECTION III IRRIGATION, WATER MANAGEMENT & FARMERS WATER USERS COMMUNITY (FWUC)**

**Note:** Fill in Questionnaire Sheet according to the instructions given in the Sheet

**III-1 Source of irrigation water and method of irrigation to your paddy field**

1. What is the source of water for your paddy field? (Please choose from answer code below)  **Q- 492**

1. Only rainfall	2. Mainly rainfall but sometime canal water	3. Mainly from canal but rainfall too
------------------	---	---------------------------------------

2. Do you take water from canal for rice cultivation by gravity or pumping ? (Please choose from answer code below)  **Q- 493**

1. Take water by gravity	2. Take water by pumping	3. Take water by both gravity & pumping
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3. Irrigation method you apply  **Q- 494**

1. Intermittent irrigation	2. Continuous flow/irrigation
----------------------------	-------------------------------

4. When do you take water for irrigation ? (select from below, plural answer is allowed)  **Q- 495**

1. Throughout the growing season	2. For land preparation	3. For transplanting
4. Initial tillering stage	5. During flowering stage	6. At maturing stage

5. If you irrigate water intermittently, what is the reason? (select from below)  **Q- 496**

1. The canal has water only some time	2. Not necessary continuous irrigation because rainfall is enough
3. Operation cost of pump is too high to operate pump frequently	4. Saving irrigation water for obtaining more production.
5. A rule of FWUC or requested by community or government agency	

7. Do you think you can take water from canal enough for paddy? (select from below)  **Q- 497**

1. Enough for one season paddy growing, because supported by canal & rainfall	2. Not enough
---	---------------

8. Do you know the recent rice cultivation system "SRI (System for Rice Intensification)"  **Q- 498**

1. Yes, very well and interested	2. Yes, but not interested	3. No
----------------------------------	----------------------------	-------

9. "SRI" is a newly introduced program in Cambodia to get more paddy production by saving water and chemical fertilizer. Are you interested "SRI"? **Answer by (1. Yes 2. No)**  **Q- 499**

10. If you answer "No", why you are not interested with? (plural answer is allowed)  **Q- 500**

1. Never seen a farmer applying "SRI"	2. Not receive technical guidance about "SRI" yet
3. Not have a canal to control water by yourself. (SRI requires frequent water control in the paddy field)	
4. Other reasons, please specify	

**III-II About FWUC**

Question		Answer code & answer				
1	Are you a member of FWUC	1. Yes	2. No	3. Not know	<input type="text"/>	Q-501
2	Do you know the name of FWUC you belong	1. Yes	2. Not know	3. No name	<input type="text"/>	Q-502
3	Do you know the name of FWUC chairman you belong	1. Yes	2. Not know	<input type="text"/>	<input type="text"/>	Q-503
4	Do you know the intended functions of FWUC	1. Yes	2. Not know	<input type="text"/>	<input type="text"/>	Q-504
5	Do you know the FWUC activities carried out in the last 1 year	1. Yes	2. Not know	<input type="text"/>	<input type="text"/>	Q-505
6	Did you attend the FWUC general members meeting of last year	1. Yes	2. No	3. Not held	<input type="text"/>	Q-506
7	In what FWUC activities did you attend last year; please specify	1. <input type="text"/>	2. <input type="text"/>	3. <input type="text"/>	<input type="text"/>	Q-507
8	Did you pay irrigation fee in last year; if yes how much	1. Yes	2. No	3. No fee charged	<input type="text"/>	Q-508
		<input type="text"/>	riel/ha		<input type="text"/>	Q-509
9	Expectations for FWUC	<input type="text"/>			<input type="text"/>	Q-510

**SECTION IV FLOOD DAMAGE**

Note: Fill in Questionnaire Sheet according to the instructions given in the Sheet

1. Do you suffer from flood damage?  Q- 511

1. YES  2. No

If you select 'Yes',

2. How often do you suffer from flood in a year  Q- 512

1. Once a year 2. Twice a year 3. 3 times a year 4. 4 times or more a year

3. How many days does one flood continues on average?  Q- 513

1. 1 day 2. 2 days 3. 3 days 4. 4 days or more

4. How do the floods damage you? (multiple answers are allowed)   Q- 514

1. Paddy	2. Vegetable Field	6. Large Livestock e.g. Buffalo, Cow	5. Poultry	4. Fish
3. Household Goods e.g. House, Motorcycle	7. Family's Life	8. Others ( )		

## Questionnaire (Crop Budget)

### PART IV CROP BUDGET ANALYSIS ON RICE PRODUCTION

**Note:** To collect information for crop budget analyses on rice production from 30 representative farmers selected from the sample farmers of this Questionnaire Survey, by using the survey sheet on next page. No. of samples for each cropping season are as follows;

Cropping Season	Sample No.
Wet season rice	10 samples
Early wet season rice	10 samples
Dry season rice	10 samples

JICA STUDY ON BASIN-WIDE BASIC IRRIGATION AND DRAINAGE MASTER PLAN

Sample No.	Commune:	Village:	Enumerator:
Land Use Category	1. Irrigated Paddy Field	2. Rainfed Paddy Field	
Commodity	1. Irrigated Rice/Wet Season	2. Irrigated Rice/Early Wet Season	3. Dry Season Rice
	Serial No. / 20 samples	Serial No. / 10 samples	Serial No. / 10 samples

**I. Gross Return**

Items	Per Farm				Per Ha			Remarks
	Unit	Unit Price (riel)	Quantity	Amount (1000riel)	Unit	Quantity	Amount (1000riel)	
Planted Area	ha	—		—	ha	1.0	—	
Harvested Area	ha	—		—	ha	1.0	—	
Production								
- Dry unhusked rice	kg				kg/ha			
- Milled rice	kg				kg/ha			
<b>Gross Return</b>	—	—	—		—	—		

**II. Production Costs - 1/2**

Items	Per Farm				Per Ha			Remarks
	Unit	Unit Price (riel)	Quantity	Amount (1000riel)	Unit	Quantity	Amount (1000riel)	
<b>1. Farm Inputs</b>	—	—	—		—	—		Variety:
Seed	kg				kg/ha			Seed source:
Fertilizer	—	—	—		—	—		
1st Dressing								
Urea	kg				kg/ha			
DAP	kg				kg/ha			
KCl	kg				kg/ha			
Compost	kg				kg/ha			
Others	kg				kg/ha			
2nd Dressing								
Urea	kg				kg/ha			
( )								
( )	kg				kg/ha			
3rd Dressing								
Urea	kg				kg/ha			
( )	kg				kg/ha			
( )	kg				kg/ha			
Agro-chemicals	—	—	—		—	—		
( )	kg				kg/ha			
( )	kg				kg/ha			
( )	lit				lit/ha			
( )	lit				lit/ha			
<b>2. Land Preparation</b>	—	—	—		—	—		
Draft Animal	animal day			—	animal day		—	a pair of animal day
Tractor	tractor day			—	tractor day		—	Working hours/day:
<b>3. Pumping Irrigation Costs</b>	times				times/ha			times/season
<b>4. Other Materials</b>	—	—	—		—	—		
( )					/ha			
( )					/ha			
( )					/ha			

JICA STUDY ON BASIN-WIDE BASIC IRRIGATION AND DRAINAGE MASTER PLAN

Sample No.	Commune:	Village:	Enumerator:
Land Use Category	1. Irrigated Paddy Field	2. Rainfed Paddy Field	
Commodity	1. Irrigated Rice/Wet Season	2. Irrigated Rice/Early Wet Season	3. Dry Season Rice
	Serial No. / 20 samples	Serial No. / 10 samples	Serial No. / 10 samples

II. Production Costs - 2/2

Items	Per Farm				Per Ha			Remarks
	Unit	Unit Price (riel)	Quantity	Amount (1000riel)	Unit	Quantity	Amount (riel)	
<b>5. Other Costs</b>								
Land Rent	riel				riel/ha			
Land Tax	riel				riel/ha			
Irrigation Fee	riel				riel/ha			
Interest	riel				riel/ha			
<b>6. Hired Labor Costs</b>								
Male	man-day							Working hours/day:
Female	man-day							Working hours/day:
<b>Production Costs</b>	—	—	—		—	—		

III. Net Return

Net Return	Per Farm	Per Ha

Labor Requirements & Costs

Farming Activities	Unit	Hired Labor			Family Labor (man-day)	Total Requirement (man-day)	Remarks
		Quantity (man-day)	Unit Price (riel)	Amount (1000riel)			
Nursery	Male						
	Female						
Land Preparation	Male						
	Female						
Transplanting	Male						
	Female						
Fertilization	Male						
	Female						
Chemical Spray	Male						
	Female						
Weeding	Male						
	Female						
Water Management	Male						
	Female						
Harvesting	Male						
	Female						
Threshing	Male						
	Female						
Transportation	Male						
	Female						
Drying	Male						
	Female						
Other Works	Male						
	Female						
Labor Requirements & Costs	Male						
	Female						
	Total						