

Table D-16 Farm Household Economy of Priority Areas (1/2)

Amount	(Unit: Riel 1,000/household)							
	Cash Income and Expenditure				Including production value and home consumption			
	USP	SRP		PDP	USP	SRP		PDP
	Ang160	Kim Sei			Ang160	Kim Sei		
No. of Respondents	46	20	20	20	46	20	20	20
<b>Average family size</b>	5.2	5.5	4.9	5.3	5.2	5.5	4.9	5.3
<b>Average Farm Size (ha)</b>	0.92	1.22	1.48	1.24	0.92	1.22	1.48	1.24
Paddy field	0.87	1.10	1.33	1.15	0.87	1.10	1.33	1.15
Secondary crop field	0.03	0.07	0.07	0.06	0.03	0.07	0.07	0.06
Tree crop land	0.02	0.05	0.08	0.03	0.02	0.05	0.08	0.03
<b>Income</b>								
Paddy/Rice	39.3	12.8	50.9	80.5	424.9	537.2	649.6	561.7
Vegetables	11.8	36.9	35.5	8.5	23.7	73.7	71.0	17.0
Fruits	1.7	23.0	17.0	11.8	3.5	46.1	34.0	23.5
Other agri. products	0.0	9.5	8.8	0.0	0.0	19.0	17.5	0.0
Subtotal of crop	52.8	82.2	112.2	100.8	452.1	676.0	772.1	602.2
Livestock	312.9	276.8	479.8	253.1	329.3	291.3	505.0	266.4
<b>Total of Farm Income</b>	<b>365.7</b>	<b>358.9</b>	<b>591.9</b>	<b>353.9</b>	<b>781.4</b>	<b>967.3</b>	<b>1,277.1</b>	<b>868.6</b>
Fish	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Salary	26.1	61.8	312.0	126.5	26.1	61.8	312.0	126.5
On-farm wage	0.0	6.3	7.0	2.0	0.0	6.3	7.0	2.0
Off-farm wage	77.6	69.8	18.3	75.5	77.6	69.8	18.3	75.5
Business	27.8	30.0	4.0	40.3	27.8	30.0	4.0	40.3
Fire wood	0.0	5.0	0.0	0.0	0.0	5.0	0.0	0.0
Forest products	0.0	0.9	0.0	0.0	0.0	0.9	0.0	0.0
Others	6.4	6.3	0.0	0.0	6.4	6.3	0.0	0.0
<b>Total of Off-farm Income</b>	<b>137.9</b>	<b>193.9</b>	<b>341.3</b>	<b>244.3</b>	<b>137.9</b>	<b>193.9</b>	<b>341.3</b>	<b>244.3</b>
<b>Total</b>	<b>503.6</b>	<b>552.8</b>	<b>933.2</b>	<b>598.1</b>	<b>919.3</b>	<b>1,161.2</b>	<b>1,618.3</b>	<b>1,112.8</b>
<b>Expenditure</b>								
<b>1. Production Cost</b>								
Paddy	69.9	77.9	144.4	158.0	69.9	77.9	144.4	158.0
Other crops	0.9	3.1	6.7	2.4	0.9	3.1	6.7	2.4
Livestock	187.4	105.9	143.1	106.6	187.4	105.9	143.1	106.6
<b>Total</b>	<b>258.2</b>	<b>186.9</b>	<b>294.1</b>	<b>267.0</b>	<b>258.2</b>	<b>186.9</b>	<b>294.1</b>	<b>267.0</b>
<b>2. Living Expenditure</b>								
Rice/paddy	19.6	13.8	7.6	5.2	405.2	538.2	606.3	486.3
Other foods	49.2	41.5	74.7	63.3	79.2	125.4	161.2	96.8
<b>Food total</b>	<b>68.7</b>	<b>55.3</b>	<b>82.3</b>	<b>68.4</b>	<b>484.4</b>	<b>663.7</b>	<b>767.5</b>	<b>583.1</b>
Health	25.3	47.6	41.4	45.2	25.3	47.6	41.4	45.2
Education	33.8	19.9	67.7	28.0	33.8	19.9	67.7	28.0
Clothes	18.9	47.3	79.8	47.7	18.9	47.3	79.8	47.7
Fuel/Electricity	8.9	31.7	53.6	25.9	8.9	31.7	53.6	25.9
Transportation	28.0	35.7	44.9	23.4	28.0	35.7	44.9	23.4
Housing	18.1	9.5	153.0	76.6	18.1	9.5	153.0	76.6
Invest to business	24.0	25.6	31.3	6.9	24.0	25.6	31.3	6.9
Tax	3.8	0.0	3.8	1.1	3.8	0.0	3.8	1.1
Others	34.1	54.4	40.3	40.6	34.1	54.4	40.3	40.6
<b>Total of living expenses</b>	<b>263.7</b>	<b>326.8</b>	<b>598.0</b>	<b>363.8</b>	<b>679.4</b>	<b>935.2</b>	<b>1,283.1</b>	<b>878.6</b>
<b>Total of Expenses</b>	<b>521.8</b>	<b>513.7</b>	<b>892.1</b>	<b>630.8</b>	<b>937.5</b>	<b>1,122.1</b>	<b>1,577.3</b>	<b>1,145.5</b>
<b>Balance</b>	<b>-18.2</b>	<b>39.1</b>	<b>41.0</b>	<b>-32.7</b>	<b>-18.2</b>	<b>39.1</b>	<b>41.0</b>	<b>-32.7</b>

Note: Estimation of gross income and expenditure for "Including home consumption" is following:

Income from paddy is assumed that production value is calculated at 1,320 kg/ha for paddy field, and price of 370 riel/kg.

Income from other crops is assumed that 50% of products for consumption of farmers and 50% for sale

Income from livestock is assumed that 5% of products is consumed by farmers themselves.

Source: Social environmental baseline survey conducted by JICA Study Team

Table D-16 Farm Household Economy of Priority Areas (2/2)

Ratio	Cash Income and Expenditure				Including production value and home consumption			
	USP	SRP		PDP	USP	SRP		PDP
		Ang160	Kim Sei			Ang160	Kim Sei	
No. of Respondents	46	20	20	20	46	20	20	20
Average family size	5.2	5.5	4.9	5.3	5.2	5.5	4.9	5.3
Average Farm Size (ha)	0.92	1.22	1.48	1.24	0.92	1.22	1.48	1.24
Paddy field	0.87	1.10	1.33	1.15	0.87	1.10	1.33	1.15
Secondary crop field	0.03	0.07	0.07	0.06	0.03	0.07	0.07	0.06
Tree crop land	0.02	0.05	0.08	0.03	0.02	0.05	0.08	0.03
<b>Income</b>								
Paddy/Rice	8%	2%	5%	13%	46%	46%	40%	50%
Vegetables	2%	7%	4%	1%	3%	6%	4%	2%
Fruits	0%	4%	2%	2%	0%	4%	2%	2%
Other agri. products	0%	2%	1%	0%	0%	2%	1%	0%
Subtotal of crop	10%	15%	12%	17%	49%	58%	48%	54%
Livestock	62%	50%	51%	42%	36%	25%	31%	24%
Total of Farm Income	73%	65%	63%	59%	85%	83%	79%	78%
Fish	0%	0%	0%	0%	0%	0%	0%	0%
Salary	5%	11%	33%	21%	3%	5%	19%	11%
On-farm wage	0%	1%	1%	0%	0%	1%	0%	0%
Off-farm wage	15%	13%	2%	13%	8%	6%	1%	7%
Business	6%	5%	0%	7%	3%	3%	0%	4%
Fire wood	0%	1%	0%	0%	0%	0%	0%	0%
Forest products	0%	0%	0%	0%	0%	0%	0%	0%
Others	1%	1%	0%	0%	1%	1%	0%	0%
Total of Off-farm Income	27%	35%	37%	41%	15%	17%	21%	22%
<b>Total</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>
<b>Expenditure</b>								
<b>1. Production Cost</b>								
Paddy	13%	15%	16%	25%	7%	7%	9%	14%
Other crops	0%	1%	1%	0%	0%	0%	0%	0%
Livestock	36%	21%	16%	17%	20%	9%	9%	9%
<b>Total</b>	<b>49%</b>	<b>36%</b>	<b>33%</b>	<b>42%</b>	<b>28%</b>	<b>17%</b>	<b>19%</b>	<b>23%</b>
<b>2. Living Expenditure</b>								
Rice/paddy	4%	3%	1%	1%	43%	48%	38%	42%
Other foods	9%	8%	8%	10%	8%	11%	10%	8%
<b>Food total</b>	<b>13%</b>	<b>11%</b>	<b>9%</b>	<b>11%</b>	<b>52%</b>	<b>59%</b>	<b>49%</b>	<b>51%</b>
Health	5%	9%	5%	7%	3%	4%	3%	4%
Education	6%	4%	8%	4%	4%	2%	4%	2%
Clothes	4%	9%	9%	8%	2%	4%	5%	4%
Fuel/Electricity	2%	6%	6%	4%	1%	3%	3%	2%
Transportation	5%	7%	5%	4%	3%	3%	3%	2%
Housing	3%	2%	17%	12%	2%	1%	10%	7%
Invest to business	5%	5%	4%	1%	3%	2%	2%	1%
Tax	1%	0%	0%	0%	0%	0%	0%	0%
Others	7%	11%	5%	6%	4%	5%	3%	4%
<b>Total of living expenses</b>	<b>51%</b>	<b>64%</b>	<b>67%</b>	<b>58%</b>	<b>72%</b>	<b>83%</b>	<b>81%</b>	<b>77%</b>
<b>Total of Expenses</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>
<b>Balance</b>	<b>-4%</b>	<b>7%</b>	<b>4%</b>	<b>-5%</b>	<b>-2%</b>	<b>3%</b>	<b>3%</b>	<b>-3%</b>

Note: Estimation of gross income and expenditure for "Including home consumption" is following:

Income from paddy is assumed that production value is calculated at 1,320 kg/ha for paddy field, and price of 370 riel/kg.

Income from other crops is assumed that 50% of products for consumption of farmers and 50% for sale

Income from livestock is assumed that 5% of products is consumed by farmers themselves.

Source: Social environmental baseline survey conducted by JICA Study Team

Table D-17 Planted Area, Yield and Production (1/2)

1 USP		Net irrigable area: 3,500 ha		Beneficiaries: 4,020		
	Planted area (ha)	Project Area		Production (ton)	Average farm size family	
		Yield (kg/ha)	range		Planted area (ha)	Production (ton)
<b>Proposed (With-project)</b>						
Local paddy (medium)	2,400	2,800	2,500 - 3,000	6,720	0.60	1.67
HYV paddy (early)	1,100	3,300	3,000 - 3,500	3,630	0.27	0.90
Total of Paddy	3,500			10,350	0.87	2.57
Vegetables	550	7,400	6,000 - 10,000	4,070	0.14	1.01
Maize	100	2,000	1,800 - 2,200	200	0.02	0.05
Groundnut	100	850	800 - 900	85	0.02	0.02
Soybean	100	1,000	900 - 1,100	100	0.02	0.02
Mung-bean	100	1,000	800 - 1,300	100	0.02	0.02
Sesame	100	800	700 - 850	80	0.02	0.02
Total of Diversified Crops	1,050				0.26	
Total	4,550				1.13	
Cropping intensity (%)	130%					
<b>Present (Without-project)</b>						
Local paddy (medium)	2,730	1,320	750 - 2,000	3,604	0.68	0.90
Local paddy (late)	70	1,320	750 - 2,000	92	0.02	0.02
HYV paddy (early)	460	1,320	750 - 2,000	607	0.11	0.15
Total of paddy	3,260			4,303	0.81	1.07
Vegetables	50	4,000	3,000 - 6,000	200	0.01	0.05
Maize	10	900		9	0.00	0.00
Groundnut	10	450		5	0.00	0.00
Soybean	0	500		0	0.00	0.00
Mung-bean	30	450		14	0.01	0.00
Sesame	0	350		0	0.00	0.00
Total of diversified crops	100				0.02	0.00
Total	3,360				0.84	
Cropping intensity (%)	96%					
<b>Incremental</b>						
Total of paddy	240	0		6,047	0.06	1.50
Vegetables	500	3,400		3,870	0.12	0.96
Maize	90	1,100		191	0.02	0.05
Groundnut	90	400		81	0.02	0.02
Soybean	100	500		100	0.02	0.02
Mung-bean	70	550		87	0.02	0.02
Sesame	100	450		80	0.02	0.02
Total of diversified crops	950				0.24	0.02
Total	1,190				0.30	

2 Ang 160 SRP		Net irrigable area: 25 ha		Beneficiaries: 130		
	Planted area (ha)	Project Area		Production (ton)	Average farm size family	
		Yield (kg/ha)	range		Planted area (ha)	Production (ton)
<b>Proposed (With-project)</b>						
Local paddy (medium)	17	2,800	2,500 - 3,000	48	0.13	0.37
HYV paddy (early)	8	3,300	3,000 - 3,500	26	0.06	0.20
Total of Paddy	25			74	0.19	0.57
Vegetables	1	7,400	6,000 - 10,000	7	0.01	0.06
Maize	1	2,000	1,800 - 2,200	2	0.01	0.02
Groundnut	1	850	800 - 900	1	0.01	0.01
Mung-bean	1	1,000	800 - 1,300	1	0.01	0.01
Sesame	1	800	600 - 850	1	0.01	0.01
Total of Diversified Crops	5				0.04	
Total	30				0.23	
Cropping intensity (%)	120%					
<b>Present (Without-project)</b>						
Local paddy (medium)	21	1,320	750 - 1,500	28	0.16	0.21
HYV paddy (early)	7	1,320	800 - 2,300	9	0.05	0.07
Total of paddy	28			37	0.22	0.28
Vegetables	1	4,000		4	0.01	0.03
Maize	1	900		1	0.01	0.01
Total of diversified crops	2				0.02	
Total	30				0.23	
Cropping intensity (%)	120%					
<b>Incremental</b>						
Total of paddy	(3)	0		37	(0.02)	0.28
Vegetables	0	3,400		3	0.00	0.03
Maize	0	1,100		1	0.00	0.01
Groundnut	1	400		1	0.01	0.01
Soybean	0	500		0	0.00	0.00
Mung-bean	1	550		1	0.01	0.01
Sesame	1	450		1	0.01	0.01
Total of diversified crops	3				0.02	
Total	0				0.00	

Table D-17 Planted Area, Yield and Production (2/2)

3 Kim Sei SRP		Net irrigable area: 27 ha			Beneficiaries: 37	
	Planted area (ha)	Project Area		Production (ton)	Average farm size family	
		(kg/ha)	range		Planted area (ha)	Production (ton)
<b>Proposed (With-project)</b>						
Local paddy (medium)	16	2,800	2,500 - 3,000	45	0.43	1.21
HYV paddy (early)	8	3,300	3,000 - 3,500	26	0.22	0.71
Total of Paddy	24			71	0.65	1.92
Vegetables	1	7,400	6,000 - 10,000	7	0.03	0.20
Maize	1	2,000	1,800 - 2,200	2	0.03	0.05
Groundnut	1	850	800 - 900	1	0.03	0.02
Total of Diversified Crops	3				0.08	
Total	27				0.73	
Cropping intensity (%)	100%					
<b>Present (Without-project)</b>						
		Net cultivated area: 27 ha			Beneficiaries: 37	
Local paddy (medium)	20	1,320	750 - 1,500	26	0.54	0.71
HYV paddy (early)	6	1,320	800 - 2,300	8	0.16	0.21
Total of paddy	26			34	0.70	0.93
Maize	1	900		1	0.03	0.02
Total of diversified crops	1				0.03	
Total	27				0.73	
Cropping intensity (%)	100%					
<b>Incremental</b>						
Total of paddy	(2)	0		37	(0.05)	1.00
Vegetables	1	3,400		7	0.03	0.20
Maize	0	1,100		1	0.00	0.03
Groundnut	1	400		1	0.03	0.02
Total of diversified crops	2					
Total	0				0.00	
<b>4 Trapeang Snao PDP</b>						
		Net irrigable area: 5.82 ha			Beneficiaries: 88	
	Planted area (ha)	Project Area		Production (ton)	Average farm size family	
		(kg/ha)	range		Planted area (ha)	Production (ton)
<b>Proposed (With-project)</b>						
Local paddy (medium)	0.00	2,800	2,500 - 3,000	0.00	0.000	0.00
HYV paddy (early)	0.00	3,300	3,000 - 3,500	0.00	0.000	0.00
Total of Paddy	0.00			0.00	0.000	0.00
Vegetables	3.74	7,400	6,000 - 10,000	27.68	0.043	0.31
Groundnut	0.93	850	800 - 900	0.79	0.011	0.01
Soybean	0.93	1,000	900 - 1,100	0.93	0.011	0.01
Mung-bean	0.93	1,000	800 - 1300	0.93	0.011	0.01
Sesame	0.93	800	600 - 850	0.74	0.011	0.01
Total of Diversified Crops	7.46				0.085	
Total	7.46				0.085	
Cropping intensity (%)	128%					
<b>Present (Without-project)</b>						
		Project Area 5.82 ha			Beneficiaries: 88	
Local paddy (medium)	4.95	1,320	750 - 1,500	6.53	0.056	0.07
Local paddy (late)	0.00	1,320	750 - 1,500	0.00	0.000	0.00
HYV paddy (early)	0.58	1,320	800 - 2,300	0.77	0.007	0.01
Total of paddy	5.53			7.30	0.063	0.08
Vegetables	0.05	4,000		0.20	0.001	0.00
Groundnut	0.00	450		0.00	0.000	0.00
Soybean	0.00	500		0.00	0.000	0.00
Mung-bean	0.05	450		0.02	0.001	0.00
Sesame	0.00	350		0.00	0.000	0.00
Total of diversified crops	0.10				0.001	
Total	5.63				0.063	
Cropping intensity (%)	97%					
<b>Incremental</b>						
Total of paddy	(5.53)	0		(7.30)	-0.063	(0.08)
Vegetables	3.69	3,400		27.48	0.042	0.31
Groundnut	0.93	400		0.79	0.011	0.01
Soybean	0.93	500		0.93	0.011	0.01
Mung-bean	0.88	550		0.91	0.010	0.01
Sesame	0.93	450		0.74	0.011	0.01
Total of diversified crops	7.36				0.084	
Total	1.83				0.021	

Table D-18 Proposed Input and Labor Force Requirements

	Target Yield (kg/ha)	Seed			Urea (46:0:0) (kg/ha)	DAP (18:46:0) (kg/ha)	KCL (0:0:60) (kg/ha)	Fertilizer value (1000Riel/ha)	Net nutrient			Labor requirement md/ha
		Quantity (kg/ha)	Price (Riel/kg)	Value (Riel 1,000/ha)					N (kg/ha)	P (kg/ha)	K (kg/ha)	
Paddy												
Local (medium paddy)	2,800	65	400	26.0	80	45	25	129.0	45	21	15	90
HYV (Early paddy)	3,300	50	400	20.0	100	45	25	145.0	54	21	15	90
Maize	2,000	20	2,000	40.0	120	40	30	160.0	62	18	18	80
Groundnut	850	50	4,500	225.0	55	50	25	114.0	34	23	15	65
Soybean	1,000	65	1,800	117.0	55	50	25	114.0	34	23	15	60
Mung-bean	900	50	2,200	110.0	55	50	25	114.0	34	23	15	60
Sesame	800	8	2,500	20.0	40	60	25	112.0	29	28	15	50
Vegetables												
1 Cucumber	10,000	3.0	30,000	90.0	170	65	50	241.0	90	30	30	130
2 String-bean	6,000	30.0	4,000	120.0	105	65	50	189.0	60	30	30	120
3 Tomato	9,000	0.4	80,000	32.0	80	130	100	274.0	60	60	60	120
4 Eggplant	9,000	0.4	44,000	17.6	80	130	100	274.0	60	60	60	130
5 Chili	6,000	0.4	38,000	15.2	145	130	100	326.0	90	60	60	120
6 Pumpkin	9,000	3.0	10,000	30.0	105	65	50	189.0	60	30	30	95
7 Watermelon	9,000	4.0	50,000	200.0	80	130	100	274.0	60	60	60	100
8 Bitter guard	8,000	1.0	35,000	35.0	80	130	100	274.0	60	60	60	110
9 Onion leaf	4,000	5.0	8,000	40.0	80	130	50	234.0	60	60	30	100
10 Mustard green	8,000	0.4	40,000	16.0	105	65	25	169.0	60	30	15	100
11 Chinese kale	8,000	2.0	8,000	16.0	105	65	50	189.0	60	30	30	100
12 Salad	6,000	0.5	20,000	10.0	105	65	25	169.0	60	30	15	100
13 Leek	7,000	15.0	5,200	78.0	105	65	50	189.0	60	30	30	100
14 Chinese radish	8,000	8.0	3,500	28.0	80	130	100	274.0	60	60	60	110
15 Sweet corn	6,000	30.0	3,000	90.0	145	130	100	326.0	90	60	60	110
16 Okra	6,000	5.0	15,000	75.0	105	65	50	189.0	60	30	30	100
Average of Vegetables	7,438	6.8	24,606	55.8	105	98	69	236.3	66	45	41	109
Round of average	7,400	6.8	8,200	55.8	105	100	70	240.0	66	46	42	110

Table D-19 Market Prices of Agricultural Products and Fertilizer at Takeo Market (1/2)

Commodity	Unit	2000												2001						Average						
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun		Jul	Aug	Sep	Oct	Nov	
Paddy / Rice																										
Paddy (Local)	kg													357	308	320	380	400	420	400	400	400	400	480	388	
Paddy (HYV)	kg													275	261	231	260	290	350	300	350	350	360	450	316	
Paddy (Mixed)	kg	383	387	388	386	405	409	405	442	455	452	427	350	340	322	304	316	335	363	400	395	395	380	460	387	
Rice (Local)	kg	672	615	619	631	627	639	660	717	754	775	712	612	567	650	523	520	537	610	680	658	665	686	680	644	
Rice (HYV)	kg	582	374	551	490	457	493	475	570	545	553	560	501	340	323	304	410	420	507	523	528	586	602	595	491	
Rice (Mixed)	kg	613	591	597	546	494	530	530	625	590	620	590	549	524	536	497	447	520	590	651	631	654	654	655	575	
Rice Bran	kg	440	465	425	477	437	350	350	440	350	340	387	450	450	412	375	338	313	300	290	300	290	325	412	379	
Other secondary crop																										
Cassava	kg						725	725	563	520	600	550	475	400									700	300	620	562
Sweet potato	kg	275	400	400	375	263	250	337	350	375	389	363	325	325	325	350	400	300	350	450	450	487	600	500	376	
Potato	kg	4,000	4,750	4,750	3,735	3,250	3,250	3,200	3,750	3,650	4,075	4,075	4,000	3,250	3,400	3,500	2,500	2,875	3,125	3,375	2,875	3,125	4,250	3,126	3,560	
Taro	kg	500	500								675	650	500	500	500	500	2,500	2,400	2,400	2,300	2,050	2,050	1,900	1,650	1,950	554
Groundnut	kg	2,670	2,675	2,675	2,650	2,575	2,575	2,625	2,600	2,600	2,650	2,600	2,650	2,600	2,600	2,500	2,400	2,400	2,300	2,050	2,050	1,900	1,650	1,950	2,432	
Soybean	kg	1,550	1,600	1,600	1,525	1,500	1,600	1,600	1,600	1,600	1,675	1,800	1,600	1,700	1,600	1,700	1,650	1,700	1,700	1,725	1,850	1,750	1,750	1,775	1,659	
Mung-bean	kg	2,050	2,100	2,200	2,250	2,450	2,450	2,400	2,300	2,175	2,100	2,300	2,375	2,400	2,450	2,300	2,100	2,050	2,025	1,950	2,050	2,150	2,150	2,200	2,216	
Cowpea	kg	3,725	2,600	3,300	2,600	2,475	2,375	2,400	2,300	2,500	2,425	2,450	2,475	2,575	2,550	2,300	2,050	2,000	2,200	2,250	2,300	2,400	2,400	2,250	2,474	
Sesame (Black)	kg	3,125	3,450	3,100	3,650	3,075	3,175	3,350	3,725	4,050	3,725	3,525	3,575	2,925	3,050	3,100	3,050	3,350	3,300	3,225	3,600	3,825	3,550	2,475	3,347	
Sesame (White)	kg	2,275	2,500	2,425	2,550	2,400	2,450	2,775	2,950	3,150	3,225	2,500	2,500	2,250	2,350	2,375	2,125	2,300	2,375	2,050	2,125	2,600	2,625	2,050	2,475	
Vegetables																										
Yard long-bean	kg	900	1,075	850	850	863	800	925	875	900	1,100	1,200	1,000	925	775	800	800	1,000	850	800	875	950	1,000	1,175	926	
String-bean	kg													1,000	900	800	800	800							860	
Carrot	kg	3,500	3,250	2,750	2,750	2,500	2,750	2,750	3,125	3,000	2,750	3,375	2,750	2,750	3,000	3,250	2,600	2,875	2,375	2,750	2,625	2,625	2,500	2,250	2,820	
Garlic	kg													2,400	2,370	2,400	2,400	2,400	2,400	2,400	2,350	2,400	2,400	2,400	2,393	
Red small onion	kg													2,000	2,000	2,000	2,500	2,700	2,775	3,500	3,700	3,750	3,700	3,700	2,939	
Onion	kg													2,000	1,700	1,000	1,000	1,500	1,500	1,420	1,800	1,700	2,500	2,400	1,656	
Leaf Onion	kg																1,500					3,000	3,000		2,500	
Cucumber	kg	560	925	650	800	600	425	925	800	875	1,125	1,350	925	600	600	500	550	575	350	350	725	850	775	750	721	
Pumpkin	kg													500	500	500	500	400	500	500	500	500	500	500	490	
Eggplant	kg															400	500	400	500	500	700	700	600	550	544	
Tomato	kg	1,400	725	775	725	1,000	1,500	1,650	1,570	1,625	1,950	2,100	2,175	1,575	1,250	625	800	1,475	1,700	1,625	1,525	1,600	1,625	1,250	1,402	
Chili	kg																1,000	1,700	1,500	2,400	2,350	800	4,000		1,964	
Watermelon	kg															500	500	700					700		600	
Bitter melon	kg															1,000	1,000	1,200	1,050	950	1,300	1,000	1,200		1,088	
Bottle gourd	kg															500	400	500	500	550	500	500	500		494	
Chayote	kg															1,200	1,000	1,000	1,100	1,000	1,000	1,000	1,000		1,038	
Chinese cabbage	kg															2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,200	2,000		2,029
Chinese green leaf	kg	300	700	650	650	725	800	920	875	750	235	875	600	450	537	750	700	1,000	825	1,000	1,000	1,000	1,000	1,200		763

Source: Takeo DAFF

Table D-19 Market Prices of Agricultural Products and Fertilizer at Takeo Market (2/2)

Commodity	Unit	2000												2001												Average
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov		
<b>Vegetables</b>																										
Chinese kale	kg	875	1,175	1,450	1,625	1,525		1,700	1,825	2,350	3,425	2,200	2,425	1,300	1,475	1,200	1,500	2,933	2,350	2,075	1,350	1,200	1,775	2,400	1,824	
Cauliflower	kg	1,975	2,225	2,025	2,500	2,150				4,250	5,450	4,325	4,800	2,500	2,675	2,375	2,300	4,000	3,500					4,500	3,222	
Cabbage	kg	1,000	1,075	900	850	875	925	925	1,025	1,100	1,425	1,325	1,225	1,025	1,050	1,000	1,200	1,400	1,075	1,025	1,100	1,000	875	825	1,053	
Mustard green	kg	520	900	650	700	900	875	1,075	1,225	1,250	1,675	1,700	1,050	650	850	650	625	1,300	1,375	800	850	1,225	1,170	1,625	1,028	
Salad	kg	1,975	2,075	2,375	2,200	2,350	2,800	2,500	2,625	3,000	4,325	4,875	2,875	2,250	2,325	2,500	1,775	3,500	2,200	237	2,300	2,250	3,550	5,800	2,724	
Kankong	kg	362	375	363	425	413	313	300	338	350	388	425	350	338	388	362	400	600	550	350	425	475	475	500	403	
Leek	kg																900	1,700		1,700	1,850	2,000	2,500	1,500	1,736	
Bean sprout	kg	750	800	725	550	725	775	800	750	750	725	875	800	775	775	775	700	800	725	725	800	750	775	775	757	
Straw mushroom	kg															4,500	5,000	5,000	4,500	5,000	5,000	5,000	5,500	4,500	4,889	
<b>Fruits</b>																										
Banana	bunch	625	650	575	550	425	375	375	500	600	575	650	650	203	650	600	625	515	500	550	525	650	625	650	550	
Papaya	kg	1,650												1,775	1,775	1,875	2,250	2,300	2,125	2,050	2,000	1,525	1,875	1,650	1,915	
Mango	kg															1,000	800	1,000	1,570						1,093	
Longan	kg															3,500	3,800	2,800	2,800	1,800	1,500	2,300	2,000	2,500	2,556	
Pineapple	kg	650	625	600	650	450	450	750	725	600	600	600	550	625	550	475	475	550	550	575	575	675	575	650	588	
Coconut	piece	775	700	775	725	425	425	525	475	525	550	600	600	525	600	450	500	550	600	550	525	600	700	600	580	
Lemon/lime	kg																1,600	2,000	2,000	1,800	1,700	1,700	1,200	1,500	1,688	
Rambutan	kg																3,800	3,200	2,500	1,200	600	1,500			2,133	
Sapodilla	kg	1,350	1,625	1,625	1,325	1,425	1,500	1,500	1,450	1,450	1,450	1,500	1,200	1,275	1,375	1,350	1,400	1,375	1,450	1,450	1,425	1,500	1,400	1,400	1,426	
<b>Livestock</b>																										
Duck (Live)	kg																3,000	3,000	3,000	3,500	3,500	2,000	2,000	2,500	2,813	
Chicken (Live)	kg																3,500	3,700	5,500	6,000	6,000	6,500	5,500	6,000	5,338	
Pig (Live)	kg													2,500	2,500	2,500	2,500	2,400	2,700	2,600	2,700	2,600	2,650	2,800	2,586	
Egg (duck)	piece	220	228	245	220	185	180	200	210	223	230	230	205	200	200	201	140	185	220	210	220	242	287	222	213	
Egg (Chicken)	piece	180	205	215	200	185	190	195	200	200	200	200	195	200	180	190	250	173	200	200	200	217	245	220	202	
Pork	kg	8,500	9,000	8,125	8,000	8,000	8,000	8,500	8,375	7,500	8,250	8,250	7,500	7,500	7,500	7,000	7,000	6,625	7,000	7,000	7,000	6,875	7,000	7,000	7,630	
Beef	kg	8,500	9,000	8,375	8,500	8,500	9,000	9,000	9,000	8,625	9,000	9,000	8,750	8,250	8,750	8,500	8,500	8,875	9,000	9,000	9,000	9,000	9,000	9,000	8,788	
Duck meat	kg	3,400	3,250	3,575	3,775	4,050	5,950	4,450	4,425	4,100	4,000	3,575	3,450	3,350	3,175	3,650	5,000	3,675	4,500	4,500	4,500	3,575	3,500	3,850	3,968	
Chicken meat	kg													7,750	7,000	6,500	6,000	7,750	8,000	8,000	8,000	8,375	8,125	8,620	7,647	
<b>Fish</b>																										
Mud fish	kg	8,000	8,500	7,750	7,750	8,000	8,250	8,500	8,500	8,000	8,000	8,000	7,625	3,825	3,625	3,750	3,700	4,375	5,075	4,750	5,250	5,375	5,375	5,250	6,401	
Chador fish	kg	5,000	5,250	4,950	5,075	5,475	4,800	4,700	5,000	5,250	5,175	4,875	4,750	4,200	4,075	4,250	4,825	4,700	5,000	5,000	4,375	4,575	4,900	4,667	4,820	
<b>Fertilizer</b>																										
Urea (Thai)	kg					760	760	795	790	755	775	790	770	765	778	790	770	740	740	710	665	670	635	645	742	
Urea (Vietnam)	kg	505	570	570	560	560	600	650	705	704	704	710	705				680	660	660	660	600	600	640	640	634	
16-16-8-13S	kg																820	795	760	720	710	720	760	740	753	
15-15-15	kg	990	1,020	1,000	998	990	1,000	1,005	995	935	950	1,005	985	980	938	935	940	940	940	930	893	903	900	900	960	
DAP (18-46-0)	kg	990	1,020	960	930	955	945	960	955	915	915	930	908	905	915	920	895	880	890	885	873	865	860	860	919	
AP (16-20-0)	kg	765	840	800	795	800	780	795	830	760	755	795	770	765	753	765	765	740	740	755	740	725	710	665	766	

Source: Takeo DAFF

Table D-20 Price of Farm-gate Inputs and Cost

(Unit: Riel)

Commodity	Unit	Farm-gate price	Commune Survey	Angk Ta Saom Market	Takeo Market	Note
<b>Fertilizer</b>						
Urea (46:0:0)	50kg		30,000 ~ 47,000	33,000	34,000	Vietnam
		40,000		35,000	35,000	Indonesia
				38,000	39,000	Thailand
Ammonium Sulfate (18:0:0)	50kg			30,000		Cambodia
DAP (18:46:0)	50kg	50,000	50,000 ~ 58,000	48,000	45,000	Thailand
KCI (0:0:60)	50kg	40,000				
Complex (16:16:8:13S)	50kg	44,000	44,000	43,000	41,000	Thailand
(15:15:15)	50kg		49,000 - 50,000	48,000	48,000	Philippine
Organic manure / Farm manure	ton	30,000	40,000/m3	-	-	
<b>Seed</b>						
Paddy IR, HYV	kg	400	450			
Paddy Local	kg	400	450			
Soybean	kg	1,800				
Groundnut	kg	4,500				
Mungbean	kg	2,200				
Maize Hybrid	kg	2,000				
Sesame	kg	2,500				
Castor bean	kg	800				
<b>Vegetables</b>						
Tomato	kg	80,000			13,000	Cambodia
Cucumber	kg	30,000		35,000	34,000	Cambodia
Eggplant	kg	100,000		25,000	25,000	Cambodia
Pumpkin	kg	10,000		7,000	7,000	Cambodia
Bitter gourd	kg			1500/20g		Thailand
Long gourd	kg				13,000	Cambodia
Salada	kg				36,000	Vietnam
String bean	kg	4,000				
Cauliflower	kg			6,500/20g ?		Thailand
Mustard green	kg			800/20g		Thailand
Watermelon	kg	40,000		1,000/20g ?		Thailand
Yard long bean	kg			(1,500/20g)	13,000	Cambodia
Chinese radish	kg			700/20g	700/20g	Thailand
<b>Fruit samplings</b>						
Mango Local	plant	1,500	1,500			Local
Improved	plant	4,000				Slakou Station
Papaya	plant	500	500			Local
Longan	plant	500	500			Local
Lemon / Lime	plant	1,500	1,000-1,500			Slakou Station
Coconut	plant	1,500	1,500			Local
Cashew	plant	500	500			Local
<b>Livestock</b>						
<b>Vaccination</b>						
Cattle	time/head	1,000				
Pig	time/head	1,000				
Chicken	time/head	500				
<b>Mating/Insemination</b>						
Cattle	time/head	10,000-15,000				
Pig	time/head	7,000-10,000				
<b>Mixed feed for pig</b>						
for child pig	25kg	37,000		37,000	37,000	
for Medium	25kg	23,000		23,000	23,000	
for Large	25kg	36,000		36,000	36,000	
<b>Mixed feed for duck</b>						
for child	25kg	30,000		30,000	30,000	
for matured	25kg	28,000		28,000	28,000	
<b>Mixed feed for chicken</b>						
for child	25kg	33,000		33,000	33,000	
for matured	25kg	29,000		29,000	29,000	
<b>Fuel/Energy</b>						
Gasoline	liter	2,100	2,100	2,000	2,000	
Diesel	liter	1,600	1,600	1,500	1,500	
Kerosene	liter	1,400	1,400	1,300	1,300	
Electricity	kWh			1,900	900	
Fire-wood	kg			100	100	
<b>Other cost</b>						
Hired Labor Male	day	3,000	2,500 ~ 3,500	3000- 3,500	3,000	with lunch 2,500
Female	day	3,000	2,500 ~ 3,500	3,000- 3500	3,000	
Price of farmland dealing	ha		1.0 ~ 3.0 million			
Rice milling charge in village	kg	40	30 - 50	40 - 50	40 - 50	
<b>Land preparation cost by draft animal</b>						
Plowing (1 times)	ha	49,000			49,000	
Plowing (2 times)	ha	42,000			42,000	
Paddling/leveling	ha	42,000	35,000 ~ 60,000		35,000	
	ha	7 days, R.7,000/day				
<b>Land preparation cost by tractor</b>						
Plowing (1 times)	ha	45,000			45,000	
Paddling/leveling	ha	30,000			30,000	
Threshing by mechanical thresher	ton	24,000			24,000	
<b>Draft animal equipment</b>						
Cart	set	280,000		270,000-300,000	270,000-300,000	
Plow	set	100,000			100,000	
Harrow	set	15,000		10,000-15,000	15,000	

Source: JICA Study Team



Table D-21 Farm-gate Price and Wholesale Market Price in Phnom Penh

	Farm-gate price (1)	Wholesale price at Phnom Penh (2)	Difference	
			(2) / (1)	(2) - (1)
	(Riel/kg)	(Riel/ha)		(Riel/kg)
Paddy				
Local (medium paddy)	370	400 *	108%	30
HYV (Early paddy)	300	320 *	107%	20
Maize	600	650	108%	50
Groundnut	1,300	1,800	138%	500
Soybean	1,200	1,280	107%	80
Mung-bean	1,400	1,920	137%	520
Sesame	1,800	2,200	122%	400
Vegetables				
1 Cucumber	450	650	144%	200
2 String-bean	800	1,000	125%	200
3 Tomato	700	1,200	171%	500
4 Eggplant	500	600	120%	100
5 Chili	1,000	1,400	140%	400
6 Pumpkin	450	550	122%	100
7 Watermelon	450	550	122%	100
8 Bitter guard	700	1,150	164%	450
9 Onion leaf	1,000	1,700	170%	700
10 Mustard green	600	800	133%	200
11 Chinese kale	900	1,150	128%	250
12 Salad	1,100	1,600	145%	500
13 Leek	900	1,400	156%	500
14 Chinese radish	600	750	125%	150
15 Sweet corn	600	800	133%	200
16 Okra	700	900	129%	200
Average of vegetables	716	1,013	139%	297
Average rounded	690	980	142%	290

Source: JICA Study Team

Table D-22 Labor Balance in Future Plan of USP and Kim Sei SRP

USP

Per ha (man-day/ha)	Planted area (ha)	Labor Requirement (man-day/month)												Total
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Paddy local	2,400	8						7	18	20	7	15	15	90
Paddy HYV	1,100								20	25	8	25	12	90
Vegetables	550	14	14	8		6	14	14	14	6		6	14	110
Maize	100	7	10	6		6	11	7	10	6		6	11	80
Groundnut	100	6	9	5		5	8	5	8	5		5	9	65
Soybean	100	5	9	5		5	7	4	7	5		5	8	60
Mung-bean	100	5	9	5		5	7	4	7	5		5	8	60
Sesame	100	4	8	2		5	6	4	6	2		5	8	50
<b>Project area (1000 man-day)</b>														
Paddy local	2,400	19.2	0.0	0.0	0.0	0.0	0.0	16.8	43.2	48.0	16.8	36.0	36.0	216.0
Paddy HYV	1,100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	22.0	27.5	8.8	27.5	13.2	99.0
Vegetables	550	7.7	7.7	4.4	0.0	3.3	7.7	7.7	7.7	3.3	0.0	3.3	7.7	60.5
Maize	100	0.7	1.0	0.6	0.0	0.6	1.1	0.7	1.0	0.6	0.0	0.6	1.1	8.0
Groundnut	100	0.6	0.9	0.5	0.0	0.5	0.8	0.5	0.8	0.5	0.0	0.5	0.9	6.5
Soybean	100	0.5	0.9	0.5	0.0	0.5	0.7	0.4	0.7	0.5	0.0	0.5	0.8	6.0
Mung-bean	100	0.5	0.9	0.5	0.0	0.5	0.7	0.4	0.7	0.5	0.0	0.5	0.8	6.0
Sesame	100	0.4	0.8	0.2	0.0	0.5	0.6	0.4	0.6	0.2	0.0	0.5	0.8	5.0
<b>Total (a)</b>	<b>4,550</b>	<b>29.6</b>	<b>12.2</b>	<b>6.7</b>	<b>0.0</b>	<b>5.9</b>	<b>11.6</b>	<b>26.9</b>	<b>76.7</b>	<b>81.1</b>	<b>25.6</b>	<b>69.4</b>	<b>61.3</b>	<b>407.0</b>
Available labor force * (b)		175.6	175.6	175.6	175.6	175.6	175.6	175.6	175.6	175.6	175.6	175.6	175.6	2,107.1
Balance (b-a)		146.0	163.4	168.9	175.6	169.7	164.0	148.7	98.9	94.5	150.0	106.2	114.3	1,700.1
(a/b)		17%	7%	4%	0%	3%	7%	15%	44%	46%	15%	40%	35%	19%
Note *: Estimated at assumption of followings														
Beneficiaries households									family			4,020		
Average family size									person/h.h			5.1		
Average labor force per household									person/h.h			3.1		
Agricultural labor force per household									person/h.h			2.8		
Agricultural labor force in the project area									person			11,256		
Available labor force for on-farm work (80% for male, 50% for female)									%			65%		
Workable days for on-farm work per month									day/month			24		
Available labor force for on-farm work per month									1000 man-day			175.6		

Kim Sei SRP

Per ha (man-day/ha)	Planted area (ha)	Labor Requirement (man-day/month)												Total
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Paddy local	16	10							20	22	9	14	15	90
Paddy HYV	8								20	25	8	25	12	90
Vegetables	1	20								10	28	28	24	110
Maize	1	15								6	24	15	20	80
Groundnut	1	10								5	20	14	16	65
Rain-fed area *	22	11	1				2	6	14	18	10	9	14	85
<b>Project area (1000 man-day)</b>														
Paddy local	16	160	0	0	0	0	0	0	320	352	144	224	240	1,440
Paddy HYV	8	0	0	0	0	0	0	0	160	200	64	200	96	720
Vegetables	1	20	0	0	0	0	0	0	0	10	28	28	24	110
Maize	1	15	0	0	0	0	0	0	0	6	24	15	20	80
Groundnut	1	10	0	0	0	0	0	0	0	5	20	14	16	65
Rain-fed area *	22	242	22	0	0	0	44	132	308	396	220	198	308	1,870
<b>Total (a)</b>	<b>49</b>	<b>447</b>	<b>22</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>44</b>	<b>132</b>	<b>788</b>	<b>969</b>	<b>500</b>	<b>679</b>	<b>704</b>	<b>4,285</b>
Available labor force * (b)		1,616	1,616	1,616	1,616	1,616	1,616	1,616	1,616	1,616	1,616	1,616	1,616	19,394
Balance (b-a)		1,169	1,594	1,616	1,616	1,616	1,572	1,484	828	647	1,116	937	912	15,109
(a/b)		28%	1%	0%	0%	0%	3%	8%	49%	60%	31%	42%	44%	22%
Note *: Estimated at assumption of followings														
Beneficiaries households									family			37		
Average family size									person/h.h			4.9		
Average labor force per household									person/h.h			2.3		
Agricultural labor force per household									person/h.h			2.8		
Agricultural labor force in the project area									person			104		
Available labor force for on-farm work (80% for male, 50% for female)									%			65%		
Workable days for on-farm work per month									day/month			24		
Available labor force for on-farm work per month									man-day			1,616		

Note\*: Non-irrigable area of beneficiary's land

Table D-23 Input Requirements (1/4)

1 USP

Beneficiaries: 4,020

	Per ha					Project Area						Per Household (1000 Riel)					Total	
	Seed (kg)	Fertilizer			Farm manure (ton)	Planted area (ha)	Seed (ton)	Fertilizer			Farm manure (ton)	Planted area (ha)	Seed	Fertilizer				
		Urea (kg)	DAP (kg)	KCL (kg)				Urea (ton)	DAP (ton)	KCL (ton)				Urea	DAP	KCL		
<b>Proposed (With-project)</b>																		
Local paddy	65	80	45	25	3	2,400	156	192	108	60	7,200	0.60	15.5	38.2	26.9	11.9	92.5	
Paddy HYV	50	100	45	25	3	1,100	55	110	50	28	3,300	0.27	5.5	21.9	12.3	5.5	45.1	
Subtotal						3,500	211	302	158	88	10,500	0.87	21.0	60.1	39.2	17.4	137.7	
Vegetables	6.8	105	100	70	4	550	4	58	55	39	2,200	0.14	8.2	11.5	13.7	7.7	41.0	
Maize	20	100	40	30	0	100	2.0	10	4	3	0	0.02	1.0	2.0	1.0	0.6	4.6	
Groundnut	40	55	50	25	0	100	4.0	6	5	3	0	0.02	4.0	1.1	1.2	0.5	6.8	
Soybean	65	55	50	25	0	100	6.5	6	5	3	0	0.02	0.1	1.1	1.2	0.5	2.9	
Mung-bean	50	55	50	25	0	100	5.0	6	5	3	0	0.02	2.7	1.1	1.2	0.5	5.6	
Sesame	8	40	60	25	0	100	0.8	4	6	3	0	0.02	0.5	0.8	1.5	0.5	3.3	
Subtotal						1,050	22.0	88	80	52	2,200	0.26	16.5	17.6	19.9	10.2	64.2	
Total						4,550	233	390	238	139	12,700	1.13	37.5	77.7	59.1	27.7	201.9	
<b>Present (Without-project)</b>																		
Paddy local	65	30	20	0	1	2,800	182	84	56	0	2,800	0.70	18.1	16.7	13.9	0.0	48.8	
Paddy HYV	50	30	20	0	1	460	23	14	9	0	460	0.11	2.3	2.7	2.3	0.0	7.3	
Subtotal						3,260	205	98	65	0	3,260	0.81	20.4	19.5	16.2	0.0	56.1	
Vegetables	6.8	50	45	10	2	50	0.3	3	2	1	100	0.01	0.7	0.5	0.6	0.1	1.9	
Maize	20	30	20	0	0	10	0.2	0	0	0	0	0.00	0.1	0.1	0.0	0.0	0.2	
Groundnut	40	15	10	0	0	10	0.4	0	0	0	0	0.00	0.4	0.0	0.0	0.0	0.5	
Soybean	65	15	10	0	0	0	0.0	0	0	0	0	0.00	0.0	0.0	0.0	0.0	0.0	
Mungbean	50	15	10	0	0	30	1.5	0	0	0	0	0.01	0.8	0.1	0.1	0.0	1.0	
Sesame	8	10	5	0	0	0	0.0	0	0	0	0	0.00	0.0	0.0	0.0	0.0	0.0	
Subtotal						100	0.0	0	0	0	100	0.02	2.1	0.7	0.7	0.1	3.5	
Total						3,360	205	98	65	0	3,360	0.84	22.5	20.1	16.9	0.1	59.6	
<b>Incremental</b>																		
Paddy						240	6	204	92	88	7,240	0.06	0.6	40.6	23.0	17.4	81.6	
Vegetables	0	55	55	60	2	500	3	55	53	38	2,100	0.12	7.4	11.0	13.1	7.6	39.1	
Other diversified crops						450	16	30	24	13	0	0.11	7.0	5.9	6.1	2.6	21.5	
Total						1,190	28	292	172	139	9,340	0.30	15.0	57.5	42.2	27.6	142.3	

Table D-23 Input Requirements (2/4)

2 Ang 160 SRP

Beneficiaries: 130

	Per ha					Planted area (ha)	Project Area					Planted area	Per household (1000 Riel)				Total
	Seed (kg)	Fertilizer			Farm manure (ton)		Seed (ton)	Fertilizer			Farm manure (ton)		Seed	Fertilizer			
		Urea (kg)	DAP (kg)	KCL (kg)				Urea (ton)	DAP (ton)	KCL (ton)				Urea	DAP	KCL	
<b>Proposed (With-project)</b>																	
Local paddy	65	80	45	25	3	17	1.1	1.4	0.8	0.4	51	0.13	3.4	8.4	5.9	2.6	20.3
Paddy HYV	50	100	45	25	3	8	0.4	0.8	0.4	0.2	24	0.06	1.2	4.9	2.8	1.2	10.2
Subtotal						25	1.5	2.2	1.1	0.6	75	0.19	4.6	13.3	8.7	3.8	30.4
Vegetables	6.8	105	100	70	4	1	0.0	0.1	0.1	0.1	4	0.01	0.4	0.6	0.8	0.4	2.3
Maize	20	80	40	30	0	1	0.0	0.1	0.0	0.0	0	0.01	0.3	0.5	0.3	0.2	1.3
Groundnut	40	55	50	25	0	1	0.0	0.1	0.1	0.0	0	0.01	1.4	0.3	0.4	0.2	2.3
Mung-bean	50	55	50	25	0	1	0.1	0.1	0.1	0.0	0	0.01	0.8	0.3	0.4	0.2	1.7
Sesame	8	40	60	25	0	1	0.0	0.0	0.1	0.0	0	0.01	0.2	0.2	0.5	0.2	1.0
Subtotal						5	0.1	0.3	0.3	0.2	4	0.04	3.1	2.1	2.3	1.1	8.6
Total						30	1.6	2.5	1.4	0.8	79	0.23	7.8	15.4	11.0	4.9	39.0
<b>Present (Without-project)</b>																	
Paddy local	65	30	20	0	1	21	1.4	0.6	0.4	0.0	21.0	0.16	4.2	3.9	3.2	0.0	11.3
Paddy HYV	50	30	20	0	1	7	0.4	0.2	0.1	0.0	7.0	0.05	1.1	1.3	1.1	0.0	3.4
Subtotal						28	1.7	0.8	0.6	0.0	28.0	0.22	5.3	5.2	4.3	0.0	14.8
Vegetables	6.8	50	45	10	2	1	0.0	0.1	0.0	0.0	2.0	0.01	0.4	0.3	0.3	0.1	1.1
Maize	20	30	20	0	0	1	0.0	0.0	0.0	0.0	0.0	0.01	0.3	0.2	0.2	0.0	0.6
Groundnut	40	15	10	0	0	0	0.0	0.0	0.0	0.0	0.0	0.00	0.0	0.0	0.0	0.0	0.0
Mung-bean	50	15	10	0	0	0	0.0	0.0	0.0	0.0	0.0	0.00	0.0	0.0	0.0	0.0	0.0
Sesame	8	10	5	0	0	0	0.0	0.0	0.0	0.0	0.0	0.00	0.0	0.0	0.0	0.0	0.0
Subtotal						2	0.0	0.0	0.0	0.0	0.0	0.02	0.7	0.5	0.5	0.1	1.8
Total						30	1.7	0.8	0.6	0.0	28.0	0.23	6.0	5.7	4.8	0.1	16.5
<b>Incremental</b>																	
Paddy						(3)	-0.2	1.3	0.6	0.6	47.0	(0.02)	-0.6	8.1	4.3	3.8	15.7
Vegetables	0	55	55	60	2	0	0.0	0.1	0.1	0.1	2.0	0.00	0.0	0.3	0.4	0.4	1.1
Other diversified crops						3	0.1	0.2	0.2	0.1	0.0	0.02	2.4	1.2	1.4	0.6	5.6
Total						0	-0.1	1.7	0.9	0.8	51.0	0.00	1.7	9.7	6.2	4.9	22.4

Table D-23 Input Requirements (3/4)

## 3 Kim Sei SRP

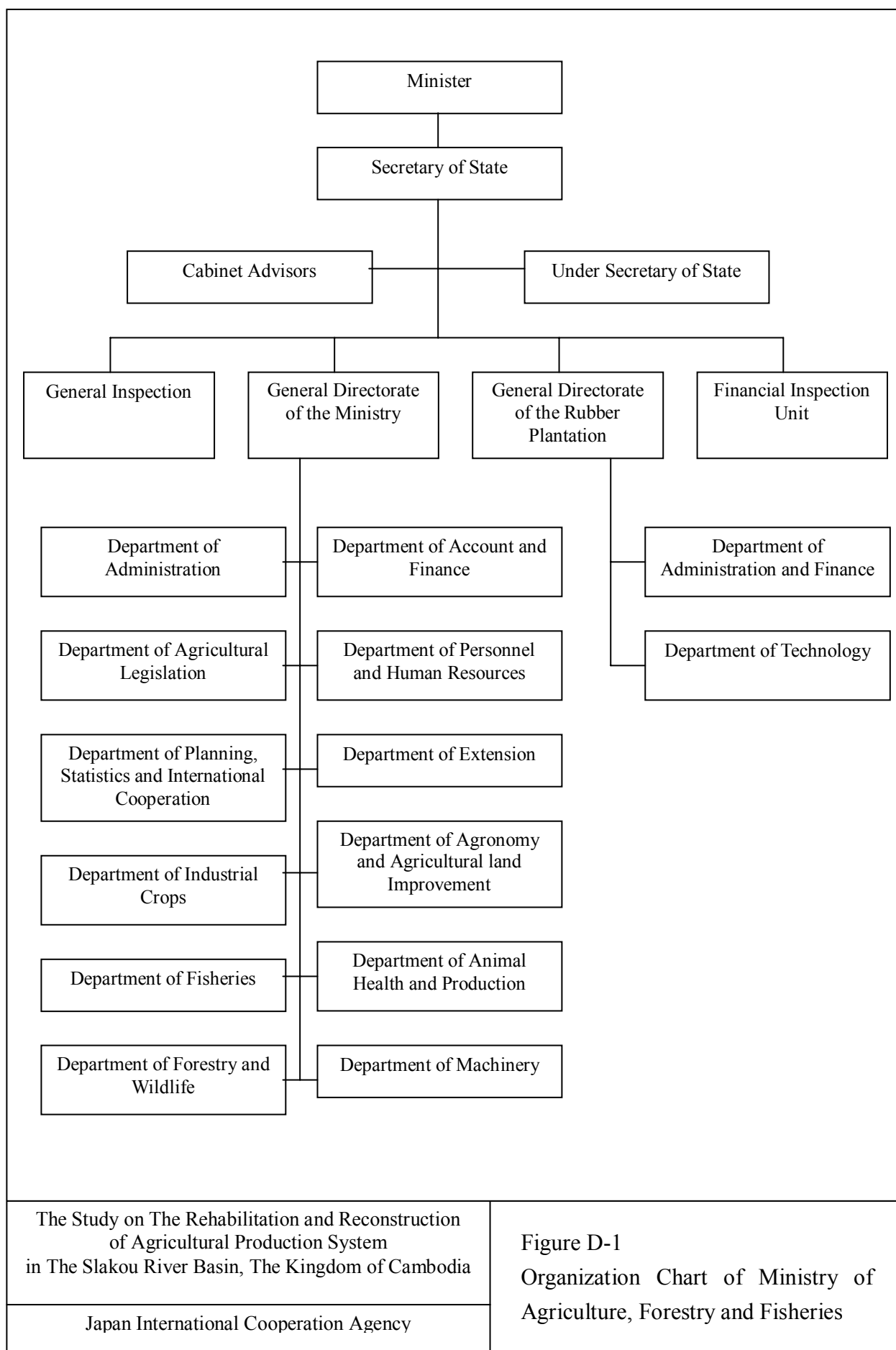
	Per ha					Project Area					Per household (1000 Riel)						
	Seed (kg)	Fertilizer			Farm manure (ton)	Planted area (ha)	Seed (ton)	Fertilizer			Farm manure (ton)	Planted area	Seed	Fertilizer			Total
		Urea (kg)	DAP (kg)	KCL (kg)				Urea (ton)	DAP (ton)	KCL (ton)				Urea	DAP	KCL	
<b>Proposed (With-project)</b>																	
Local paddy	65	80	45	25	3	16	1.0	1.3	0.7	0.4	48.0	0.43	11.2	27.7	19.5	8.6	67.0
Paddy HYV	50	100	45	25	3	8	0.4	0.8	0.4	0.2	24.0	0.22	4.3	17.3	9.7	4.3	35.7
Subtotal						24	1.4	2.1	1.1	0.6	72.0	0.65	15.6	45.0	29.2	13.0	102.7
Vegetables	6.8	105	100	70	4	1	0.0	0.1	0.1	0.1	4.0	0.03	1.5	2.3	2.7	1.5	8.0
Maize	20	80	40	30	0	1	0.0	0.1	0.0	0.0	0.0	0.03	1.1	1.7	1.1	0.6	4.5
Groundnut	40	55	50	25	0	1	0.0	0.1	0.1	0.0	0.0	0.03	4.9	1.2	1.4	0.5	7.9
Subtotal						3	0.1	0.2	0.2	0.1	4.0	0.08	7.5	5.2	5.1	2.7	20.5
Total						27	1.5	2.3	1.3	0.7	76.0	0.73	23.0	50.2	34.3	15.7	123.2
<b>Present (Without-project)</b>																	
Paddy local	65	30	20	0	1	20	1.3	0.6	0.4	0.0	20.0	0.54	14.1	13.0	10.8	0.0	37.8
Paddy HYV	50	30	20	0	1	6	0.3	0.2	0.1	0.0	6.0	0.16	3.2	3.9	3.2	0.0	10.4
Subtotal						26	1.6	0.8	0.5	0.0	26.0	0.70	17.3	16.9	14.1	0.0	48.2
Vegetables	6.8	50	45	10	2	0	0.0	0.0	0.0	0.0	0.0	0.00	0.0	0.0	0.0	0.0	0.0
Maize	20	30	20	0	0	1	0.0	0.0	0.0	0.0	0.0	0.03	1.1	0.6	0.5	0.0	2.3
Groundnut	40	15	10	0	0	0	0.0	0.0	0.0	0.0	0.0	0.00	0.0	0.0	0.0	0.0	0.0
Subtotal						1	0.0	0.0	0.0	0.0	0.0	0.03	1.1	0.6	0.5	0.0	2.3
Total						27	1.6	0.8	0.5	0.0	26.0	0.73	18.4	17.5	14.6	0.0	50.5
<b>Incremental</b>																	
Subtotal						(2)	-0.2	1.3	0.6	0.6	46.0	(0.05)	-1.7	28.1	15.1	13.0	54.5
Vegetables	0	55	55	60	2	1	0.0	0.1	0.1	0.1	4.0	0.03	1.5	2.3	2.7	1.5	8.0
Other diversified crop						1	0.0	0.1	0.1	0.1	0.0	0.03	4.9	2.3	1.9	1.2	10.2
Total						0	-0.1	1.5	0.8	0.7	50.0	0.00	4.6	32.6	19.7	15.7	72.7

Table D-23 Input Requirements (4/4)

## 4 Trapeang Snao PDP

	Per ha					Project Area						Per household (1000 Riel)						
	Seed (kg)	Fertilizer			Farm manure (ton)	Planted area (ha)	Seed (ton)	Fertilizer			Farm manure (ton)	Planted area	Seed	Fertilizer			Total	
		Urea (kg)	DAP (kg)	KCL (kg)				Urea (ton)	DAP (ton)	KCL (ton)				Urea	DAP	KCL		
<b>Proposed (With-project)</b>																		
Local paddy	65	80	45	25	3	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.0	0.0	0.0	0.0	0.0	0.0
Paddy HYV	50	100	45	25	3	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.0	0.0	0.0	0.0	0.0	0.0
Subtotal						0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.0	0.0	0.0	0.0	0.0	0.0
Vegetables	6.8	105	100	70	4	3.74	0.03	0.39	0.37	0.26	14.96	0.043	2.4	3.6	4.3	2.4	12.6	
Groundnut	40	55	50	25	0	0.93	0.04	0.05	0.05	0.02	0.00	0.011	1.9	0.5	0.5	0.2	3.1	
Soybean	65	55	50	25	0	0.93	0.06	0.05	0.05	0.02	0.00	0.011	1.2	0.5	0.5	0.2	2.4	
Mung-bean	50	55	50	25	0	0.93	0.05	0.05	0.05	0.02	0.00	0.011	1.2	0.5	0.5	0.2	2.4	
Sesame	8	40	60	25	0	0.93	0.01	0.04	0.06	0.02	0.00	0.011	0.2	0.3	0.6	0.2	1.4	
Subtotal						7.46	0.18	0.58	0.57	0.35	14.96	0.085	6.9	5.3	6.5	3.2	21.9	
Total						7.46	0.18	0.58	0.57	0.35	14.96	0.085	6.9	5.3	6.5	3.2	21.9	
<b>Present (Without-project)</b>																		
Paddy local	65	30	20	0	1	4.95	0.32	0.15	0.10	0.00	4.95	0.056	1.5	1.4	1.1	0.0	3.9	
Paddy HYV	50	30	20	0	1	0.58	0.03	0.02	0.01	0.00	0.58	0.007	0.1	0.2	0.1	0.0	0.4	
Subtotal						5.53	0.35	0.17	0.11	0.00	5.53	0.063	1.6	1.5	1.3	0.0	4.4	
Vegetables	6.8	50	45	10	2	0.05	0.00	0.00	0.00	0.00	0.10	0.001	0.0	0.0	0.0	0.0	0.1	
Groundnut	40	15	10	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.0	0.0	0.0	0.0	0.0	
Soybean	65	15	10	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.0	0.0	0.0	0.0	0.0	
Mung-bean	50	15	10	0	0	0.05	0.00	0.00	0.00	0.00	0.00	0.001	0.1	0.0	0.0	0.0	0.1	
Sesame	8	10	5	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.0	0.0	0.0	0.0	0.0	
Subtotal						0.10	0.00	0.00	0.00	0.00	0.10	0.001	0.1	0.0	0.0	0.0	0.2	
Total						5.63	0.35	0.17	0.11	0.00	5.63	0.064	1.7	1.5	1.3	0.0	4.5	
<b>Incremental</b>																		
Paddy						(5.53)	(0.35)	(0.17)	(0.11)	0.00	(5.53)	(0.06)	-1.6	-1.5	-1.3	0.0	-4.4	
Vegetables	0	55	55	60	2	3.69	0.03	0.39	0.37	0.26	14.86	0.04	2.3	3.5	4.2	2.4	12.5	
Other diversified crop						3.67	0.15	0.19	0.19	0.09	0.00	0.04	4.5	1.7	2.2	0.8	9.2	
Total						1.83	(0.18)	0.41	0.46	0.35	9.33	0.02	5.2	3.8	5.2	3.2	17.4	

## *Figures*

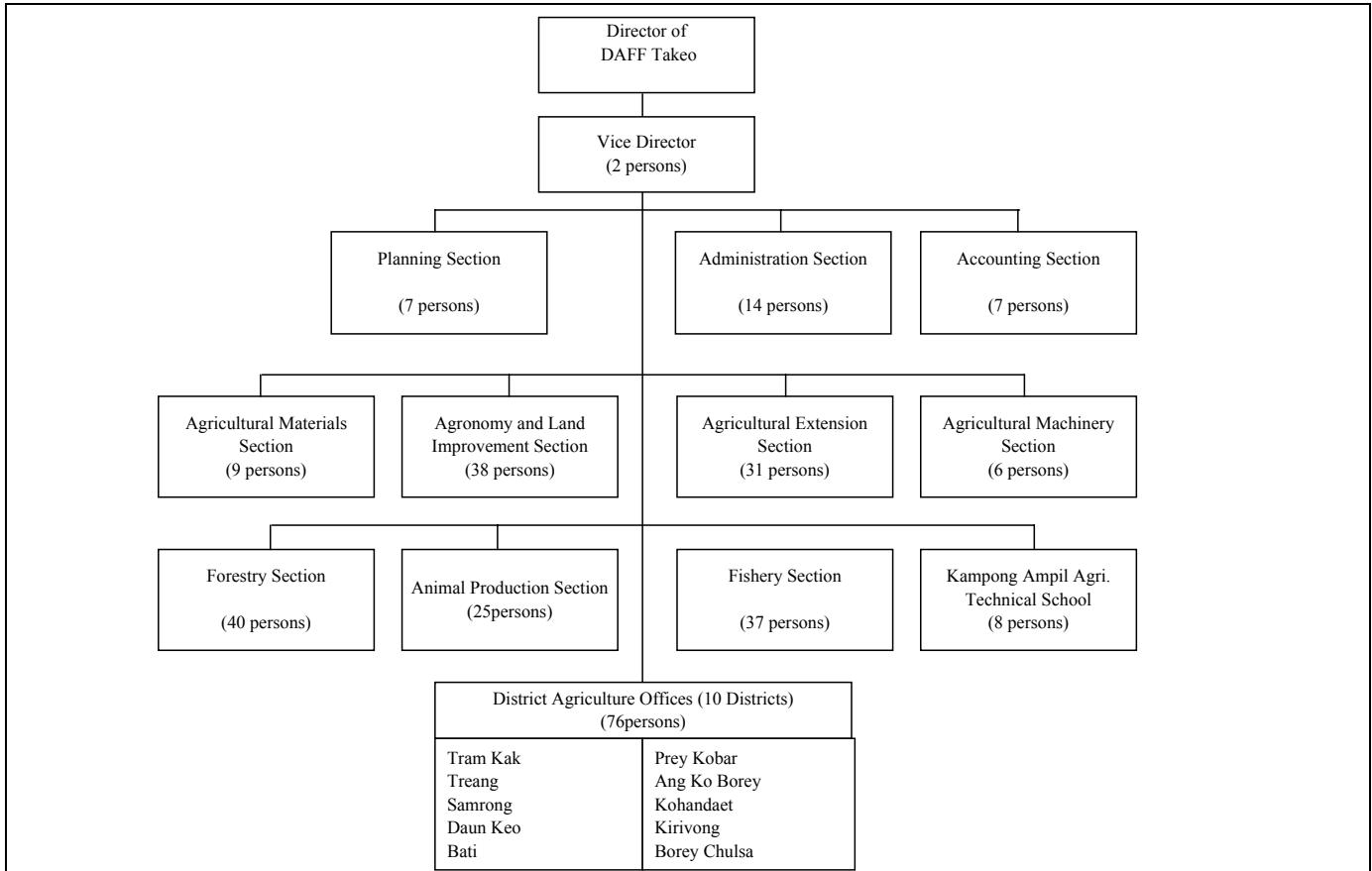


The Study on The Rehabilitation and Reconstruction of Agricultural Production System in The Slakou River Basin, The Kingdom of Cambodia

Japan International Cooperation Agency

Figure D-1  
Organization Chart of Ministry of Agriculture, Forestry and Fisheries





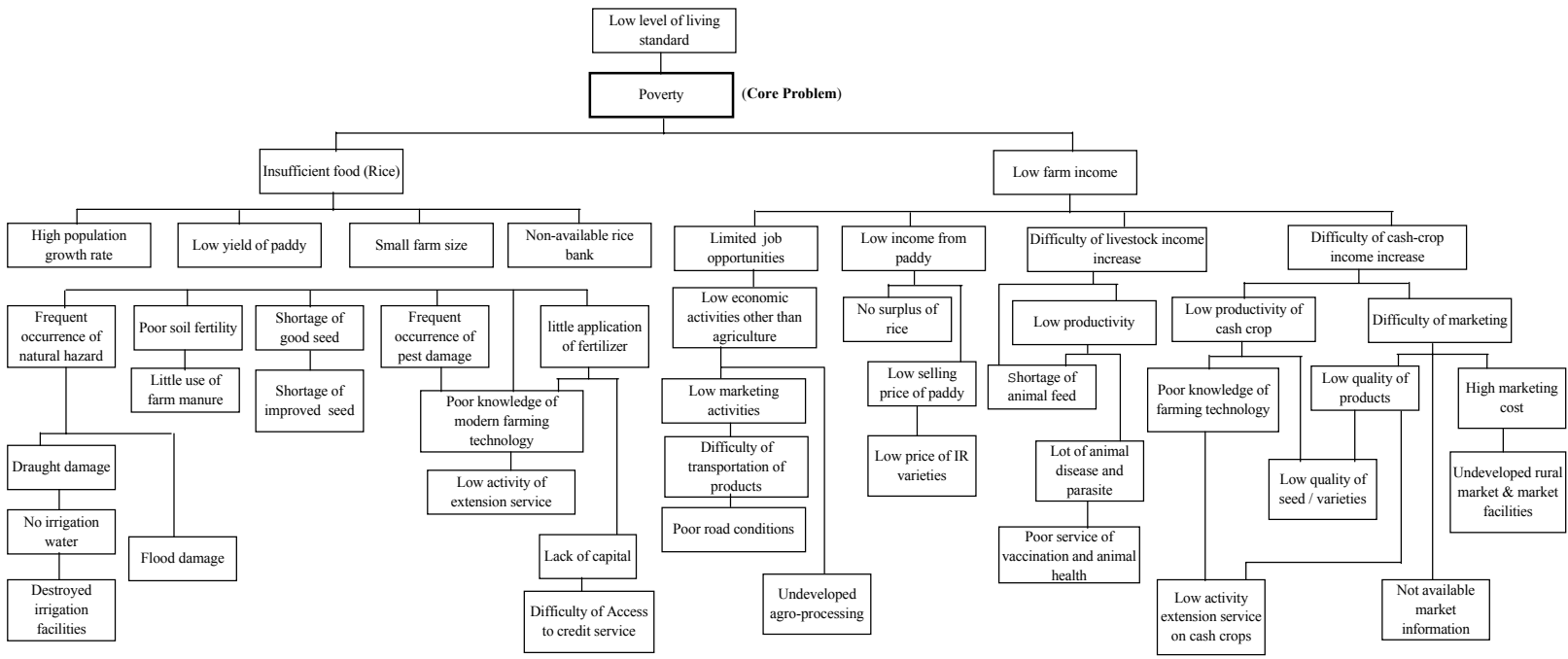
<b>Engineer class</b>	<b>18</b>
Economy	4
Agronomy	2
Fishery	3
Animal production	5
Forestry	2
General agriculture	1
Marketing	1
<b>Controller class</b>	<b>58</b>
Agronomy	24
Metrology	1
Animal production	13
Accounting	3
Fishery	5
Law	1
Management	1
Forestry	3
Pedology	4
Machinery	3

<b>Agent class</b>	<b>131</b>
Agronomy	40
Meteorology	4
Animal production	32
Accounting	10
Forestry	2
Land registration	1
Fishery	1
Skill labor (3month training)	10
Driver	19
Fish/freshwater management	2
Statistic	1
Plant protection	9
<b>Un-skilled class</b>	<b>94</b>
<b>Total</b>	<b>301</b>

The Study on The Rehabilitation and Reconstruction  
of Agricultural Production System  
in The Slakou River Basin, The Kingdom of Cambodia

Japan International Cooperation Agency

Figure D-2  
Organization of Provincial Direction of Agriculture,  
Forestry and Fisheries in Takeo



The study on the reconstruction and  
 Agricultural Production System  
 in The Salou River Basin, The Kingdom of

Japan International Cooperation Agency

Figure D-3  
 Problem Tree on Agriculture

