Table 6	District Inventry	(Bolikhamsai)
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Table 6 District Inventry (Bolikhamsai)	,		¥. 111		
Province Districts	Unit	Thaphabath	Bolikham Bolikham	khamsai Paksan	Pakkading
(1) Administrative area	km2	1,212	1,803	654	2,410
(2) Population a) Number of Zones		4	4	8	4
b) Number of villages	nos	32	50	75	57
c) Number of house-hold	nos	3,640	2,582	5,913	5,215
d) Average family size	nos	5.3	6.2	6.2	6.2
e) Estimated population		19,424	16,625	34,693	31,440
f) Literacy rate	%		43.2		
g) Ethnic group		10.044	10.040	22.004	25.242
i) Lao Loum ii) Lao Theung	persons persons	18,941 405	13,340 1,308	33,896 591	25,342 1,070
iii) Lao Soung	persons	44	1,970	35	1,110
iv) Others	persons	34	6	171	65
(3) Social infrastructure	,		-		
a) Water Supply Provision	%	84.0	67.0	82.0	34.0
b) Electricity Provision	%		25.0		
c) No. of Primary school	nos		42		
d) No. of Secondary school	nos		4		
e) No. of High school f) No. of Hospital (No. of bed)	nos	1 (10)	1 (20)	1 (70)	1 (24)
g) No. of Dispensary (No. of bed)	nos	1 (10) 3 (8)	2 (10)	1 (70) 4 (18)	1 (24) 3 (12)
h) No. of Latrine	nos	661	414	2,042	361
(4) Agriculture	1	001	747	2,072	301
a) Land Use					
i) Rainfed Paddy field	ha	3,850	1,384	6,789	5,568
ii) Irrigated Paddy field	ha	544	115	1,200	734
iii) Upland Paddy field	ha		1,005		388
iv) Cultivated Levee area	ha				330
v) Industrial Crop	ha	687	58	672	500
vi) Vegetable Crop vii) Fruit Crop	ha ha	145 8	34 5	123	195 5
b) Paddy cultivation	lia l	0	3	0	٠
i) Improved Variety (Area)	ha	2,100	809	5,322	1,786
ii) Improved Variety (Amount of seeds)	ton	126	49	319	107
iii) Local Variety (Area)	ha	1,400	1,214	2,281	3,276
iv) Local Variety (Amount of Seeds)	ton	84 .	73	137	197
c) Average holding size	ha				
d) Cropping schedule	£/4.	1.0			
i) Rain season ii) Dry season	from/to from/to	e May - 1 Nov e Dec - 1 May	e May - I Nov m Nov - I Apr	e May - I Nov e Dec - I Apr	1 May - m Nov m Nov - 1 Apr
e) Yield	170111710	e Dec - I May	III NOV - I Api	e Dec - i Api	iii Nov - 1 Api
i) Rain season	ton/ha	2.1	1.2	1.5	2.8
ii) Dry season	ton/ha	4.6	2.5	4.5	4.5
iii) lotal	ton/ha				1
t) Paddy farming information					
i) Labor input (Transplanting and Harvesting)	man-day	40.0	30.0	30.0	30.0
ii) Animal power input (Land Preparation) iii) Machine input (Land Preparation)	animal-day		21	-	
iii) Machine input (Land Preparation) g) Farming practice	machine-day	9 - 10	4	4	2
i) Planting System					
Rainfed	TP/DS	TP	TP	TP	TP
Irrigated	TP/DS	TP	TP	TP + DS	TP
ii) Fertilizer application					
Wet season	kg/ha	negligible	negligible	few (up to 100)	few (up to 150)
Dry season	kg/ha	150 - 200	150 - 200	350	150
iii) Mechanization		4000	NYS	No. 31 25	orm
Land Preparation Threshing	%	100% 95%	ND ND	Machine Major 100%	85% ND
iv) Variety (G: glutinous, N: non-glutinous)	70	93%	ND	100%	ND
Wet season	Imp/Loc	L:I=1:1	Local Major	Local and Improv.	L:I=60:40
Dry season	Imp/Loc	I=100%	I=100%	l=100%	I=100%
viii) Seedrate	1				
Wet season	kg/ha	150	36	40	80 - 100
Dry season	kg/ha	80 - 100	80 - 100	80 - 100	80
h) Flood affected area (Pady field)	%	55.0	6.0	28.0	
(5) Livestock and Fisheries					
a) No. of animals i) Buffalo	nos	4,733	4,116	4,533	7,550
i) Buffalo ii) Cattle	nos nos	4,733 7,559	4,116 3,464	4,533 8,137	7,550 5,510
iii) Pig	nos	1,082	4,005	4,166	4,256
iv) Poultry	nos	51,332	42,135	101,260	56,932
b) Vaccination		,			,
i) No. of buffalo vaccinated	nos				
ii) No. of cattle vaccinated	nos				
iii) No. of pig vaccinated	nos				
iv) No. of poultry vaccinated	nos				
c) Fishery activities					
i) Released fingering	nos	50,600	82,785		
ii) Fish Pond (No. and area)	nos/ha	6	112	217	

Districts a) Farm Input and Marketing a) Farm Input i) Fertilizer used ii) Farm Yard Manure used iii) Pesticide used iv) No. of Pump v) No. of Pump v) No. of 4 wheel tractor vi) No. of 4 wheel tractor vii) No. of harvesting machine viii) No. of hard sprayer b) Marketing i) No. of threshing machine ii) No. of pedestral threshing Machine iii) No. of mills c) Livestock Marketing i) Domestic consumption of large animals ii) Sold to other area (large animals) iii) Domestic consumption of pig iv) Sold to other area (pig) v) Domestic consumption of poultry vi) Sold to other area (poultry) DAFSO a) Approximate Annual budget b) Number of Staff (Division) ii) Crop Production iii) Livestock iv) Forestry	ton ton Kg nos nos nos nos nos nos head/year	Thaphabath 200 58 520 16 10 3 165 265 4 (21.1) 0 (0.0) 4 (21.1) 7 (36.8)	50 20 20 110 200 1,000,000 6 (22.2) 1 (3.7) 4 (14.8)	Paksan 500 180 90 491 11 16 62 1,660 684 1,200,000 3 (13.6) 2 (9.1) 5 (22.7)	Pakkading 50 300 770 4 385 9 53 367 51 1,000,000 3 (17.6) 0 (0.0)
a) Farm Input i) Fertilizer used ii) Farm Yard Manure used iii) Pesticide used iv) No. of Pump v) No. of 2 wheel tractor vi) No. of 4 wheel tractor vii) No. of harvesting machine viii) No. of hard sprayer b) Marketing i) No. of threshing machine ii) No. of pedestral threshing Machine iii) No. of mills c) Livestock Marketing i) Domestic consumption of large animals ii) Sold to other area (large animals) iii) Domestic consumption of pig iv) Sold to other area (pig) v) Domestic consumption of poultry vi) Sold to other area (poultry) ODAFSO a) Approximate Annual budget b) Number of Staff (Division) i) Crop Production ii) Irrigation iii) Livestock	ton Kg nos nos nos nos nos nos nos nos head/year	58 520 16 10 3 165 265 4 (21.1) 0 (0.0) 4 (21.1)	1,000,000 1,000,000 6 (22.2) 1 (3.7) 4 (14.8)	180 90 491 11 16 62 1,660 684 1,200,000 3 (13.6) 2 (9.1)	300 770 4 385 9 53 367 51 1,000,000 3 (17.6) 0 (0.0)
i) Fertilizer used ii) Farm Yard Manure used iii) Pesticide used iv) No. of Pump v) No. of 2 wheel tractor vi) No. of 4 wheel tractor vii) No. of harvesting machine viii) No. of hand sprayer b) Marketing i) No. of threshing machine ii) No. of pedestral threshing Machine iii) No. of mills c) Livestock Marketing i) Domestic consumption of large animals ii) Sold to other area (large animals) iii) Domestic consumption of pig iv) Sold to other area (pig) v) Domestic consumption of poultry vi) Sold to other area (poultry) 7) DAFSO a) Approximate Annual budget b) Number of Staff (Division) i) Crop Production ii) Irrigation iii) Livestock	ton Kg nos nos nos nos nos nos nos nos head/year	58 520 16 10 3 165 265 4 (21.1) 0 (0.0) 4 (21.1)	1,000,000 1,000,000 6 (22.2) 1 (3.7) 4 (14.8)	180 90 491 11 16 62 1,660 684 1,200,000 3 (13.6) 2 (9.1)	300 770 4 385 9 53 367 51 1,000,000 3 (17.6) 0 (0.0)
ii) Farm Yard Manure used iii) Pesticide used iv) No. of Pump v) No. of 2 wheel tractor vi) No. of 4 wheel tractor vii) No. of harvesting machine viii) No. of hard sprayer b) Marketing i) No. of threshing machine ii) No. of pedestral threshing Machine iii) No. of mills c) Livestock Marketing i) Domestic consumption of large animals ii) Sold to other area (large animals) iii) Domestic consumption of pig iv) Sold to other area (pig) v) Domestic consumption of poultry vi) Sold to other area (pig) v) Domestic consumption of poultry vi) Sold to other area (pig) v) Domestic consumption of poultry vi) Sold to other area (pig) v) Domestic consumption of poultry vi) Sold to other area (pig) v) DAFSO a) Approximate Annual budget b) Number of Staff (Division) i) Crop Production ii) Irrigation iii) Livestock	ton Kg nos nos nos nos nos nos nos nos head/year	58 520 16 10 3 165 265 4 (21.1) 0 (0.0) 4 (21.1)	1,000,000 1,000,000 6 (22.2) 1 (3.7) 4 (14.8)	180 90 491 11 16 62 1,660 684 1,200,000 3 (13.6) 2 (9.1)	300 770 4 385 9 53 367 51 1,000,000 3 (17.6) 0 (0.0)
iii) Pesticide used iv) No. of Pump v) No. of 2 wheel tractor vi) No. of 4 wheel tractor vii) No. of harvesting machine viii) No. of hard sprayer b) Marketing i) No. of threshing machine ii) No. of pedestral threshing Machine iii) No. of mills c) Livestock Marketing i) Domestic consumption of large animals ii) Sold to other area (large animals) iii) Domestic consumption of pig iv) Sold to other area (pig) v) Domestic consumption of poultry vi) Sold to other area (poultry) vi) Sold to other area (poultry) vi) DAFSO a) Approximate Annual budget b) Number of Staff (Division) i) Crop Production ii) Irrigation iii) Livestock	kg nos nos nos nos nos nos nos nos head/year head/year head/year head/year head/year bead/year head/year head/year head/year	520 16 10 3 165 265 4 (21.1) 0 (0.0) 4 (21.1)	1,000,000 1,000,000 6 (22.2) 1 (3.7) 4 (14.8)	90 491 11 16 62 1,660 684 1,200,000 3 (13.6) 2 (9.1)	770 4 385 9 53 367 51 1,000,000 3 (17.6) 0 (0.0)
iv) No. of Pump v) No. of 2 wheel tractor vi) No. of 4 wheel tractor vii) No. of 4 wheel tractor viii) No. of harvesting machine viii) No. of hand sprayer b) Marketing i) No. of threshing machine ii) No. of mills c) Livestock Marketing i) Domestic consumption of large animals ii) Sold to other area (large animals) iii) Domestic consumption of pig iv) Sold to other area (pig) v) Domestic consumption of poultry vi) Sold to other area (poultry) ODAFSO a) Approximate Annual budget b) Number of Staff (Division) i) Crop Production ii) Irrigation iii) Livestock	nos	520 16 10 3 165 265 4 (21.1) 0 (0.0) 4 (21.1)	1,000,000 1,000,000 6 (22.2) 1 (3.7) 4 (14.8)	90 491 11 16 62 1,660 684 1,200,000 3 (13.6) 2 (9.1)	770 4 385 9 53 367 51 1,000,000 3 (17.6) 0 (0.0)
v) No. of 2 wheel tractor vi) No. of 4 wheel tractor vii) No. of harvesting machine viii) No. of hard sprayer b) Marketing i) No. of threshing machine ii) No. of pedestral threshing Machine iii) No. of mills c) Livestock Marketing i) Domestic consumption of large animals ii) Sold to other area (large animals) iii) Domestic consumption of pig iv) Sold to other area (pig) v) Domestic consumption of poultry vi) Sold to other area (poultry) 7) DAFSO a) Approximate Annual budget b) Number of Staff (Division) i) Crop Production ii) Irrigation iii) Livestock	nos nos nos nos nos nos nos nos head/year	16 10 3 165 265 4 (21.1) 0 (0.0) 4 (21.1)	110 200 1,000,000 6 (22.2) 1 (3.7) 4 (14.8)	491 11 16 62 1,660 684 1,200,000 3 (13.6) 2 (9.1)	4 385 9 53 367 51 1,000,000 3 (17.6) 0 (0.0)
vi) No. of 4 wheel tractor vii) No. of harvesting machine viii) No. of harvesting machine viii) No. of hard sprayer b) Marketing i) No. of threshing machine ii) No. of pedestral threshing Machine iii) No. of mills c) Livestock Marketing i) Domestic consumption of large animals ii) Sold to other area (large animals) iii) Domestic consumption of pig iv) Sold to other area (pig) v) Domestic consumption of poultry vi) Sold to other area (poultry) 7) DAFSO a) Approximate Annual budget b) Number of Staff (Division) i) Crop Production ii) Irrigation iii) Livestock	nos nos nos nos nos nos nos nos head/year head/year head/year head/year head/year head/year bead/year head/year head/year head/year	16 10 3 165 265 4 (21.1) 0 (0.0) 4 (21.1)	110 200 1,000,000 6 (22.2) 1 (3.7) 4 (14.8)	11 16 62 1,660 684 1,200,000 3 (13.6) 2 (9.1)	4 385 9 53 367 51 1,000,000 3 (17.6) 0 (0.0)
viii) No. of hand sprayer b) Marketing i) No. of threshing machine ii) No. of pedestral threshing Machine iii) No. of mills c) Livestock Marketing i) Domestic consumption of large animals ii) Sold to other area (large animals) iii) Domestic consumption of pig iv) Sold to other area (pig) v) Domestic consumption of poultry vi) Sold to other area (poultry) 7) DAFSO a) Approximate Annual budget b) Number of Staff (Division) i) Crop Production ii) Irrigation iii) Livestock	nos nos nos nos nos head/year head/year head/year head/year head/year head/year bead/year head/year head/year	3 165 265 4 (21.1) 0 (0.0) 4 (21.1)	110 200 1,000,000 6 (22.2) 1 (3.7) 4 (14.8)	1,660 684 1,200,000 3 (13.6) 2 (9.1)	9 53 367 51 1,000,000 3 (17.6) 0 (0.0)
b) Marketing i) No. of threshing machine ii) No. of pedestral threshing Machine iii) No. of mills c) Livestock Marketing i) Domestic consumption of large animals ii) Sold to other area (large animals) iii) Domestic consumption of pig iv) Sold to other area (pig) v) Domestic consumption of poultry vi) Sold to other area (poultry) vi) DAFSO a) Approximate Annual budget b) Number of Staff (Division) i) Crop Production ii) Irrigation iii) Livestock	nos nos nos head/year head/year head/year head/year head/year head/year bead/year head/year Kip persons (%) persons (%) persons (%)	3 165 265 4 (21.1) 0 (0.0) 4 (21.1)	110 200 1,000,000 6 (22.2) 1 (3.7) 4 (14.8)	1,660 684 1,200,000 3 (13.6) 2 (9.1)	9 53 367 51 1,000,000 3 (17.6) 0 (0.0)
i) No. of threshing machine ii) No. of pedestral threshing Machine iii) No. of mills c) Livestock Marketing i) Domestic consumption of large animals ii) Sold to other area (large animals) iii) Domestic consumption of pig iv) Sold to other area (pig) v) Domestic consumption of poultry vi) Sold to other area (poultry) 7) DAFSO a) Approximate Annual budget b) Number of Staff (Division) i) Crop Production ii) Irrigation iii) Livestock	nos nos head/year head/year head/year head/year head/year head/year head/year kip persons (%) persons (%) persons (%)	3 165 265 4 (21.1) 0 (0.0) 4 (21.1)	110 200 1,000,000 6 (22.2) 1 (3.7) 4 (14.8)	1,660 684 1,200,000 3 (13.6) 2 (9.1)	53 367 51 1,000,000 3 (17.6) 0 (0.0)
ii) No. of pedestral threshing Machine iii) No. of mills c) Livestock Marketing i) Domestic consumption of large animals ii) Sold to other area (large animals) iii) Domestic consumption of pig iv) Sold to other area (pig) v) Domestic consumption of poultry vi) Sold to other area (poultry) 7) DAFSO a) Approximate Annual budget b) Number of Staff (Division) i) Crop Production ii) Irrigation iii) Livestock	nos nos head/year head/year head/year head/year head/year head/year head/year kip persons (%) persons (%) persons (%)	3 165 265 4 (21.1) 0 (0.0) 4 (21.1)	110 200 1,000,000 6 (22.2) 1 (3.7) 4 (14.8)	1,660 684 1,200,000 3 (13.6) 2 (9.1)	53 367 51 1,000,000 3 (17.6) 0 (0.0)
iii) No. of mills c) Livestock Marketing i) Domestic consumption of large animals ii) Sold to other area (large animals) iii) Domestic consumption of pig iv) Sold to other area (pig) v) Domestic consumption of poultry vi) Sold to other area (poultry) ') DAFSO a) Approximate Annual budget b) Number of Staff (Division) i) Crop Production ii) Irrigation iii) Livestock	nos head/year head/year head/year head/year head/year head/year Kip persons (%) persons (%) persons (%)	165 265 4 (21.1) 0 (0.0) 4 (21.1)	110 200 1,000,000 6 (22.2) 1 (3.7) 4 (14.8)	1,660 684 1,200,000 3 (13.6) 2 (9.1)	367 51 1,000,000 3 (17.6) 0 (0.0)
c) Livestock Marketing i) Domestic consumption of large animals ii) Sold to other area (large animals) iii) Domestic consumption of pig iv) Sold to other area (pig) v) Domestic consumption of poultry vi) Sold to other area (poultry) 7) DAFSO a) Approximate Annual budget b) Number of Staff (Division) i) Crop Production ii) Irrigation iii) Livestock	head/year head/year head/year head/year head/year head/year Kip persons (%) persons (%) persons (%)	165 265 4 (21.1) 0 (0.0) 4 (21.1)	110 200 1,000,000 6 (22.2) 1 (3.7) 4 (14.8)	1,660 684 1,200,000 3 (13.6) 2 (9.1)	367 51 1,000,000 3 (17.6) 0 (0.0)
i) Domestic consumption of large animals ii) Sold to other area (large animals) iii) Domestic consumption of pig iv) Sold to other area (pig) v) Domestic consumption of poultry vi) Sold to other area (poultry) vi) DAFSO a) Approximate Annual budget b) Number of Staff (Division) i) Crop Production ii) Irrigation iii) Livestock	head/year head/year head/year head/year head/year Kip persons (%) persons (%) persons (%)	4 (21.1) 0 (0.0) 4 (21.1)	1,000,000 6 (22.2) 1 (3.7) 4 (14.8)	1,200,000 3 (13.6) 2 (9.1)	1,000,000 3 (17.6) 0 (0.0)
ii) Sold to other area (large animals) iii) Domestic consumption of pig iv) Sold to other area (pig) v) Domestic consumption of poultry vi) Sold to other area (poultry) v) DAFSO a) Approximate Annual budget b) Number of Staff (Division) i) Crop Production ii) Irrigation iii) Livestock	head/year head/year head/year head/year head/year Kip persons (%) persons (%) persons (%)	4 (21.1) 0 (0.0) 4 (21.1)	1,000,000 6 (22.2) 1 (3.7) 4 (14.8)	1,200,000 3 (13.6) 2 (9.1)	1,000,000 3 (17.6) 0 (0.0)
iii) Domestic consumption of pig iv) Sold to other area (pig) v) Domestic consumption of poultry vi) Sold to other area (poultry) 7) DAFSO a) Approximate Annual budget b) Number of Staff (Division) i) Crop Production ii) Irrigation iii) Livestock	head/year head/year head/year head/year Kip persons (%) persons (%) persons (%)	4 (21.1) 0 (0.0) 4 (21.1)	1,000,000 6 (22.2) 1 (3.7) 4 (14.8)	1,200,000 3 (13.6) 2 (9.1)	1,000,000 3 (17.6) 0 (0.0)
iv) Sold to other area (pig) v) Domestic consumption of poultry vi) Sold to other area (poultry) l) DAFSO a) Approximate Annual budget b) Number of Staff (Division) i) Crop Production ii) Irrigation iii) Livestock	head/year head/year head/year Kip persons (%) persons (%) persons (%)	0 (0.0) 4 (21.1)	6 (22.2) 1 (3.7) 4 (14.8)	3 (13.6) 2 (9.1)	3 (17.6) 0 (0.0)
vi) Sold to other area (poultry) DAFSO a) Approximate Annual budget b) Number of Staff (Division) i) Crop Production ii) Irrigation iii) Livestock	head/year Kip persons (%) persons (%) persons (%) persons (%)	0 (0.0) 4 (21.1)	6 (22.2) 1 (3.7) 4 (14.8)	3 (13.6) 2 (9.1)	3 (17.6) 0 (0.0)
7) DAFSO a) Approximate Annual budget b) Number of Staff (Division) i) Crop Production ii) Irrigation iii) Livestock	Kip persons (%) persons (%) persons (%) persons (%)	0 (0.0) 4 (21.1)	6 (22.2) 1 (3.7) 4 (14.8)	3 (13.6) 2 (9.1)	3 (17.6) 0 (0.0)
a) Approximate Annual budget b) Number of Staff (Division) i) Crop Production ii) Irrigation iii) Livestock	persons (%) persons (%) persons (%) persons (%)	0 (0.0) 4 (21.1)	6 (22.2) 1 (3.7) 4 (14.8)	3 (13.6) 2 (9.1)	3 (17.6) 0 (0.0)
b) Number of Staff (Division) i) Crop Production ii) Irrigation iii) Livestock	persons (%) persons (%) persons (%) persons (%)	0 (0.0) 4 (21.1)	6 (22.2) 1 (3.7) 4 (14.8)	3 (13.6) 2 (9.1)	3 (17.6) 0 (0.0)
i) Crop Production ii) Irrigation iii) Livestock	persons (%) persons (%) persons (%)	0 (0.0) 4 (21.1)	1 (3.7) 4 (14.8)	2 (9.1)	0 (0.0)
ii) Irrigation iii) Livestock	persons (%) persons (%) persons (%)	0 (0.0) 4 (21.1)	1 (3.7) 4 (14.8)	2 (9.1)	0 (0.0)
iii) Livestock	persons (%) persons (%)	4 (21.1)	4 (14.8)		
	persons (%)			1 3144./1	4 (23.5)
IV J POLESHY			14 (51.9)	9 (40.9)	10 (58.3)
vi) Administration	persons (%)	4 (21.1)	2 (7.4)	3 (13.6)	0 (0.0)
v) Total	persons (%)	19 (100.0)	27 (100.0)	22 (100.0)	17 (100.0)
c) Number of Staff (Education level)					
i) University Level	persons (%)	2 (10.5)	3 (27.3)	6 (27.3)	5 (29.4)
ii) Technician Level iii) Vocational Level	persons (%)	15 (78.9) 2 (10.5)	17 (63.0) 7 (25.9)	10 (45.5) 6 (27.3)	11 (64.7) 1 (5.9)
iv) Total	persons (%)	19 (100.0)	27 (100.0)	22 (100.0)	17 (100.0)
d) Number of Staff (Sex)	Person (ve)	15 (100.0)	2, (100.0)	22 (100.0)	
i) Male	persons (%)	14 (73.7)	24 (88.9)	11 (50.0)	16 (94.1)
ii) Female	persons (%)	5 (26.3)	3 (11.1)	11 (50.0)	1 (5.9)
iii) Total	persons (%)	19 (100.0)	27 (100.0)	22 (100.0)	17 (100.0)
e) Number of Modern farmers					
i) Crop Production ii) Livestock	families families	7 4	3 61	3	14 0
f) Facilities	lannies	4	01	0	U
, , , , , , , , , , , , , , , , , , ,	material(year)	wood ('86)	wood ('91)	wood ('40)	wood ('75)
ii) Number of Rooms	nos	5	3	7	4
iii) Number of Tables	nos	14	10	11	6
iv) Number of Chairs	nos	18	14	22	14
v) Number of Cupboard	nos	2	1	6	3
ví) Electric supply	yes/no	yes	no	yes	no
vií) Telephone line viii) Fax Machine	lines	0	0	0	0
ix) Computer	nos	0	0	0	0
x) Type writter	nos	0	1	1 (old)	1 (old)
xi) Copy machine	nos	0	0	0	0
xii) Stencil Printer	nos	0	0	0	0
xiii) Balance/Tape for Yield test	sets	1/0	0	1	0
xiv) Vaccination Facility (Fridge, Ice box, etc.)	sets	1	1	1	1
xv) Camera	nos	1	0	0	0
xvi) Vehicles	nos	0	0	0	0
xvii` Motor Cycle xviii Motor Boat	nos	1 (without motor)	0	2 (out of order)	1 2
xin Motor Boat xiv) Bicycle	nos	3 (out of order)	0	0	1
) Environment	1100	(out of order)	 	7	
a) NBCA	ha	100,000	0	0	109,000
b) Protected Forest	ha	600	60,800	0	0
c) Production Forest	ha	0	135,303	0	135,303
d) Conservation Forest	ha	0	7,684	6,273	11,484
e) Regeneration Forest f) Degraded Forest	ha ha	0	0	3,554	10,200 16,440

Table District Inventry (Khammouane) Province		т	Khammuoane			
Districts	Unit	Hinboun	Thakhek	Nongbok	Sebangtai	
(1) Administrative area	km2	3,011	918	321	966	
(2) Population		3,011	710	321	900	
a) Number of Zones	nos	15	5	10		
b) Number of villages	nos	166	139	72		
c) Number of house-hold	nos	9,480	13,293	7,048		
d) Average family size	nos	5.7	5.2	6.1		
e) Estimated population t) Literacy rate	persons %	53,829	70,364	38,949	21,142	
g) Ethnic group	— "	26.7				
i) Lao Loum	persons	53,062	67,120	37.777	17.000	
ii) Lao Iheung	persons	328	2,520	1,172	17,000 4,142	
iii) Lao Soung	persons	416	0	0	0	
iv) Others	persons	24	724	0	0	
(3) Social infrastructure						
a) Water Supply Provision	*	36.0	73.0	50.0	65.0	
b) Electricity Provision	%					
c) No. of Primary school	nos					
d) No. of Secondary school e) No. of High school	nos					
f) No. of Hospital (No. of bed)	nos	1 (15)	0 (4 60)			
g) No. of Dispensary (No. of bed)	nos	1 (15) 11 (22)	2 (162)	1 (20)	1 (15)	
h) No. of Latrine	nos	1,298	13 (26) 4,285	11 (22) 607	5 (10)	
(4) Agriculture	1103	1,230	4,203	007	343	
a) Land Use						
i) Rainted Paddy field	ha	8,264	6,950	10,275	4,058	
ií) Irrigated Paddy field	ha	593	756	1,303	595	
iii) Upland Paddy field	ha	140	-	- 1,505		
iv) Cultivated Levee area	ha	995 (home yard)				
v) Industrial Crop	ha	111	43	310	15	
ví) Vegetable Crop	ha	522	397	557	173	
vii) Fruit Crop b) Paddy cultivation	ha					
i) Improved Variety (Area)	T	560				
ii) Improved Variety (Amount of seeds)	ha ton	563 45	736	1,910	885	
iii) Local Variety (Area)	ha	8,264	59 6,950	153 10,275	71	
iv) Local Variety (Amount of Seeds)	ton	661	556	822	4,058 325	
c) Average holding size	ha	001	330	822	323	
d) Cropping schedule						
i) Rain season	from/to	m May - e Dec	e May - e Nov	e May - I Nov	e May - e Dec	
ii) Dry season	from/to	m Nov - m Apr	m Dec - e Apr	m Nov - e Apr	m Nov - 1 Mar	
e) Yield		•		1		
i) Rain season	ton/ha	1.5	2.8	3.3	2.0	
ii) Dry season iii) Total	ton/ha	2.7	4.5	5.8	3.6	
	ton/ha					
Paddy farming information Labor input (Trans planting and Harvesting)	man-day	20.0	200			
ii) Animal power input (Land Preparation)	animal-day	30.0 15.0	30.0 15.0	30.0	ND	
	machine-day	5.0	4 - 5	ND 4.0	6.0 2.0	
g) Farming practice	machine day	5.0	4-3	4.0	2.0	
i) Planting System						
Rainfed	TP/DS	TP	TP	TP	TP	
Irrigated	TP/DS	TP	TP	TP	TP	
iii) Fertilizer application				-		
Wet season	kg/ha	negligible	some	few	negligible	
Dry season	kg/ha	300	250 - 300	150	300	
v) Mechanization						
Land Preparation	%	60%	Buffalo Major	Machine Major	Buffalo Major	
Threshing vii) Variety (G: glutinous, N: non-glutinous)	%	ND	50%	ND	ND	
	Imp/Loc	I .I-2.2	T.T 4.4	Taring		
Wet season	HDD/LOC	L:I=3:2	L:I=1:4 I=100	Local Major I=100	L:I=1:4	
Wet season Dry season				1-11K1	I=100	
Dry season	Imp/Loc	I=100	1-100	1-100		
	Imp/Loc					
Dry season viii) Seedrate Wet season Dry season	Imp/Loc kg/ha	60 80	40 - 45	ND	60 - 80	
Dry season viii) Seedrate Wet season Dry season h) Flood affected area (Pady field)	Imp/Loc	60	40 - 45 70 - 80	ND ND	60 - 80 80 - 100	
Dry season viii) Seedrate Wet season Dry season h) Flood affected area (Pady field) b) Livestock and Fisheries	Imp/Loc kg/ha kg/ha	60 80	40 - 45	ND	60 - 80	
Dry season viii) Seedrate Wet season Dry season h) Flood affected area (Pady field) 5) Livestock and Fisheries a) No. of animals	Imp/Loc kg/ha kg/ha	60 80	40 - 45 70 - 80	ND ND	60 - 80 80 - 100	
Dry season viii) Seedrate Wet season Dry season h) Flood affected area (Pady field) b) Livestock and Fisheries a) No. of animals i) Buffalo	Imp/Loc kg/ha kg/ha	60 80 28.0	40 - 45 70 - 80 15.0	ND ND	60 - 80 80 - 100	
Dry season viii) Seedrate Wet season Dry season h) Flood affected area (Pady field) b) Livestock and Fisheries a) No. of animals i) Buffalo ii) Cattle	kg/ha kg/ha	60 80 28.0 15,956 10,997	40 - 45 70 - 80 15.0 13,754 13,115	ND ND 28.0	60 - 80 80 - 100 7.0	
Dry season viii) Seedrate Wet season Dry season h) Flood affected area (Pady field) 5) Livestock and Fisheries a) No. of animals i) Buffalo ii) Cattle iii) Pig	Imp/Loc kg/ha kg/ha % nos nos nos	60 80 28.0 15,956 10,997 5,351	40 - 45 70 - 80 15.0 13,754 13,115 18,730	ND ND 28.0	60 - 80 80 - 100 7.0 7,173 6,132 3,390	
Dry season viii) Seedrate Wet season Dry season h) Flood affected area (Pady field) b) Livestock and Fisheries a) No. of animals i) Buffalo ii) Cattle iii) Pig v) Poultry	Imp/Loc kg/ha kg/ha % nos nos	60 80 28.0 15,956 10,997	40 - 45 70 - 80 15.0 13,754 13,115	ND ND 28.0 6,367 8,835	60 - 80 80 - 100 7.0 7,173 6,132	
Dry season viii) Seedrate Wet season Dry season h) Flood affected area (Pady field) b) Livestock and Fisheries a) No. of animals i) Buffalo ii) Cattle iii) Pig v) Poultry b) Vaccination	Imp/Loc kg/ha kg/ha % nos nos nos nos	60 80 28.0 15,956 10,997 5,351 67,089	40 - 45 70 - 80 15.0 13,754 13,115 18,730 114,583	ND ND 28.0 6,367 8,835 4,155 85,731	60 - 80 80 - 100 7.0 7,173 6,132 3,390 45,634	
Dry season viii) Seedrate Wet season Dry season h) Flood affected area (Pady field) 5) Livestock and Fisheries a) No. of animals i) Buffalo ii) Cattle iii) Pig v) Poultry b) Vaccination i) No. of buffalo vaccinated	Imp/Loc kg/ha kg/ha % nos nos nos nos nos	60 80 28.0 15,956 10,997 5,351 67,089	40 - 45 70 - 80 15.0 13,754 13,115 18,730 114,583	ND ND 28.0 6,367 8,835 4,155 85,731 2,010	60 - 80 80 - 100 7.0 7,173 6,132 3,390 45,634	
Dry season viii) Seedrate Wet season Dry season h) Flood affected area (Pady field) 5) Livestock and Fisheries a) No. of animals i) Buffalo ii) Cattle iii) Pig v) Poultry b) Vaccination i) No. of buffalo vaccinated ii) No. of cattle vaccinated	Imp/Loc kg/ha kg/ha % nos nos nos nos nos	60 80 28.0 28.0 15,956 10,997 5,351 67,089 5,340 1,296	40 - 45 70 - 80 15.0 13,754 13,115 18,730 114,583 8,120 1,390	ND ND 28.0 6,367 8,835 4,155 85,731 2,010 2,508	60 - 80 80 - 100 7.0 7,173 6,132 3,390 45,634 1,827 1,436	
Dry season viii) Seedrate Wet season Dry season h) Flood affected area (Pady field) 5) Livestock and Fisheries a) No. of animals i) Buffalo ii) Cattle iii) Pig v) Poultry b) Vaccination i) No. of buffalo vaccinated iii) No. of cattle vaccinated iii) No. of pig vaccinated	kg/ha kg/ha % nos nos nos nos nos nos nos	60 80 28.0 28.0 15,956 10,997 5,351 67,089 5,340 1,296 545	13,754 13,115 18,730 114,583 8,120 1,390 974	ND ND 28.0 6,367 8,835 4,155 85,731 2,010 2,508 1,050	60 - 80 80 - 100 7.0 7,173 6,132 3,390 45,634 1,827 1,436 752	
Dry season viii) Seedrate Wet season Dry season h) Flood affected area (Pady field) 5) Livestock and Fisheries a) No. of animals i) Buffalo ii) Cattle iii) Pig v) Poultry b) Vaccination i) No. of buffalo vaccinated iii) No. of cattle vaccinated iii) No. of pig vaccinated iv) No. of poultry vaccinated	Imp/Loc kg/ha kg/ha % nos nos nos nos nos	60 80 28.0 28.0 15,956 10,997 5,351 67,089 5,340 1,296	40 - 45 70 - 80 15.0 13,754 13,115 18,730 114,583 8,120 1,390	ND ND 28.0 6,367 8,835 4,155 85,731 2,010 2,508	60 - 80 80 - 100 7.0 7,173 6,132 3,390 45,634 1,827 1,436	
Dry season viii) Seedrate Wet season Dry season h) Flood affected area (Pady field) 5) Livestock and Fisheries a) No. of animals i) Buffalo ii) Cattle iii) Pig v) Poultry b) Vaccination i) No. of buffalo vaccinated iii) No. of cattle vaccinated iii) No. of pig vaccinated	kg/ha kg/ha % nos nos nos nos nos nos nos	60 80 28.0 28.0 15,956 10,997 5,351 67,089 5,340 1,296 545	13,754 13,115 18,730 114,583 8,120 1,390 974	ND ND 28.0 6,367 8,835 4,155 85,731 2,010 2,508 1,050	60 - 80 80 - 100 7.0 7,173 6,132 3,390 45,634 1,827 1,436 752	

Districts	Table District Inventry (Khammouane) Province	T	Khammuoane				
(b) Farm Input and Marketing 1) Fertilizer used 1) Pesticide used Kg 500 300 500 500 100 101 101 102 103 103 103 1	District	S Linit	Hinboun			Sebangfai	
a) Farm Input 1) Fertilizer used 1) Farm Yard Manure used 1) Farm Yard	(6) Form Input and Marketing	Oint					
1) Fertilizer used 100 45 220 573 265 11)		-					
11 Sam Yard Manure used 10 10 150 160 17		ton	45	220	572	265	
iii) Pesticide used Kg S00 300 500 100 iv) No. of 2 wheel tractor nos 476 581 140 v) No. of 2 wheel tractor nos 5 9 3 vi) No. of 4 wheel tractor nos 5 9 3 vi) No. of 4 wheel tractor nos 5 9 3 vii) No. of harvesting machine nos nos 1 viii) No. of harvesting machine nos nos 1 viii) No. of predestral threshing Machine nos nos 1 viii) No. of predestral threshing Machine nos 1 viii) No. of mills nos			45	220	373	203	
19 No. of Pump			500	300	500	100	
Y No. of 2 wheel tractor	iv) No. of Pump						
vii) No. of hard sprayer		nos	476		581		
wiii) No. of had sprayer by Marketing c c c c c c c c c		nos	5		9	3	
b) Marketing i) No. of threshing machine ii) No. of pedestral threshing Machine iii) No. of pedestral threshing Machine iii) No. of malls nos observed the properties of the p		nos					
1) No. of the threshing machine nos 2	viii) No. of hand sprayer	nos					
ii) No. of polestral threshing, Machine nos							
iii) No. of mills	ii) No of nedestral threshing Machine					2	
Disposition of large animals Dead/year Disposition of large animals Disposition Disposition of large animals Disposition of larg	iii) No. of mills		340		211	121	
1) Domestic consumption of large animals headyear	c) Livestock Marketing	105	340		211	131	
ii) Sold to other area (large animals) headyear	i) Domestic consumption of large animals	head/year					
Position	ii) Sold to other area (large animals)		_				
v) Domestic consumption of poultry beadyear 1,268 178	iii) Domestic consumption of pig	head/year					
Yi	iv) Sold to other area (pig)						
27 DAPSO	v) Domestic consumption of poultry			1,268	178		
Approximate Annual budget Number of Staff (Division) Division Division Division Division Division Division Division Designe (%) 7(12.4) 12(25.5) 10 (27.8) 7(22.6) 11 (17.8) 11 (11.1) 12(25.5) 11 (12.8) 12 (11.1) 12 (12.5) 11 (12.8) 12 (11.1) 12 (12.5) 11 (12.8) 12 (13.3) 12 (15		head/year					
b) Number of Staff (Division) i) Crop Production persons (%) 4 (11.1) 6 (2.8) 4 (11.1) 2 (6.5) iii) Livestock persons (%) 8 (2.2.) 14 (2.8) 4 (11.1) 2 (6.5) iii) Livestock persons (%) 8 (2.2.) 14 (2.8) 4 (11.1) 2 (6.5) iii) Livestock persons (%) 8 (2.2.) 14 (2.8) 4 (11.1) 2 (6.5) iii) Livestock persons (%) 8 (2.2.) 14 (2.8) 12 (3.3.) 6 (19.4) iv) Forestry persons (%) 6 (16.7) 2 (4.3.) 3 (8.3) 9 (2.8.0) v) Total c) Mumber of Staff (Education level) i) University Level persons (%) 4 (11.1) 2 (4.3.) 3 (8.3) 3 (8.7) ii) Technician Level persons (%) 13 (36.1) 28 (39.6) 22 (26.1.) 19 (61.3) iii) Vocational Level persons (%) 13 (36.1) 28 (39.6) 22 (26.1.) 19 (61.3) iii) Vocational Level persons (%) 19 (52.8) 17 (36.2) 11 (30.6) 9 (25.0) iv) Total d) Number of Staff (Education level) i) Male persons (%) 31 (86.1) 28 (59.6) 22 (46.7.) 23 (74.2) ii) Femal persons (%) 5 (18.6) 28 (59.6) 22 (46.7.) 23 (74.2) iii) Total persons (%) 5 (18.9.) 19 (40.4) 12 (33.3) 8 (25.8) iii) Total persons (%) 5 (18.9.) 19 (40.4) 12 (33.3) 8 (25.8) iii) Total persons (%) 5 (18.9.) 19 (40.4) 12 (33.3) 8 (25.8) iii) Total persons (%) 5 (18.9.) 19 (40.4) 12 (33.3) 8 (25.8) iii) Livestock families i) Building structure (year established) ii) Number of Rooms nos		72'		2 000 000	4.000.000		
1) Crop Production persons (%) 7 (19.4) 12 (25.5) 10 (27.8) 7 (22.6) 11) Irrigation persons (%) 4 (11.1) 6 (12.8) 4 (11.1) 2 (2.6) 11) Livestock persons (%) 8 (22.2) 14 (29.8) 12 (33.3) 6 (19.4) 12) Forestry persons (%) 6 (16.7) 2 (4.3) 7 (19.4) 7 (22.6) 12) Administration persons (%) 6 (16.7) 2 (4.3) 7 (19.4) 7 (22.6) 12) Total persons (%) 6 (16.7) 2 (4.3) 7 (19.4) 7 (22.6) 13) Callities Persons (%) 4 (11.1) 2 (4.3) 3 (8.3) 3 (9.7) 14) Total persons (%) 4 (11.1) 2 (4.3) 3 (8.3) 3 (9.7) 19) Total persons (%) 19 (52.8) 17 (36.2) 11 (30.6) 9 (29.0) 19) Total persons (%) 19 (52.8) 17 (36.2) 11 (30.6) 9 (29.0) 1) Male persons (%) 31 (86.1) 28 (59.6) 22 (61.1) 19 (61.3) 1) Male persons (%) 5 (13.9) 19 (40.4) 12 (33.3) 8 (25.8) 11) Total persons (%) 5 (13.9) 19 (40.4) 12 (33.3) 8 (25.8) 11) Total persons (%) 5 (13.9) 19 (40.4) 12 (33.3) 8 (25.8) 11) Total persons (%) 5 (13.9) 19 (40.4) 12 (33.3) 8 (25.8) 11) Total persons (%) 5 (13.9) 19 (40.4) 12 (33.3) 8 (25.8) 12) Total persons (%) 5 (13.9) 19 (40.4) 12 (33.3) 8 (25.8) 13) Total persons (%) 5 (13.9) 19 (40.4) 12 (33.3) 8 (25.8) 13) Total persons (%) 5 (13.9) 19 (40.4) 12 (33.3) 8 (25.8) 13) Total persons (%) 5 (13.9) 19 (40.4) 12 (33.3) 8 (25.8) 13) Total persons (%) 5 (13.9) 19 (40.4) 12 (33.3) 8 (25.8) 13) Total persons (%) 5 (13.9) 19 (40.4) 12 (33.3) 13 (100.0) 13) Total persons (%) 5 (13.9) 19 (40.4) 12 (33.3) 13 (100.0) 13) Total persons (%) 5 (13.9) 19 (40.4) 12 (33.3) 13 (100.0) 2) Total persons (%) 5 (13.9) 19 (40.4) 12 (33.3) 13 (100.0) 3) Total persons (%) 5 (13.9) 19 (40.4) 12 (33.3) 13 (100.0) 47 (100.0) 36 (100.0) 31 (100.0) 5 Tot	h) Number of Staff (Division)	Кір		2,000,000	1,800,000	1,800,000	
ii) Irrigation	i) Crop Production	persons (%)	7 (10 4)	12 (25.5)	10 (27.9)	7 (22 ()	
iii) Livestock	ii) Irrigation						
vi) Forestry	iii) Livestock						
vi) Administration persons (%) 6 (16.7) 2 (4.3) 7 (19.4) 7 (22.6) v) Total persons 36 (100.0) 36 (100.0) 31 (100.0) c) Number of Staff (Education level) persons (%) 4 (11.1) 2 (4.3) 3 (8.3) 3 (100.0) ii) University Level persons (%) 4 (11.1) 2 (4.3) 3 (8.3) 3 (9.7) iii) Technician Level persons (%) 13 (36.1) 28 (59.6) 22 (61.1) 19 (61.3) iii) Vocational Level persons (%) 19 (52.8) 17 (36.2) 11 (30.6) 9 (29.0) iv) Total persons (%) 31 (86.1) 28 (59.6) 24 (66.7) 23 (74.2) ii) Total persons (%) 31 (86.1) 28 (59.6) 24 (66.7) 23 (74.2) iii) Total persons (%) 5 (13.9) 19 (40.4) 12 (33.3) 8 (25.8) iii) Total persons (%) 5 (13.9) 19 (40.4) 12 (33.3) 8 (25.8) iii) Total persons (%) 5 (13.9) 19 (40.4) 12 (33.3) 8 (25.8) iii) Total persons (%) 5 (13.9) 19 (40.4) 12 (33.3) 8 (25.8) iii) Total persons (%) 5 (13.9) 19 (40.4) 12 (33.3) 8 (25.8) iii) Total persons (%) 5 (13.9) 19 (40.4) 12 (33.3) 8 (25.8) iii) Total persons (%) 5 (13.9) 19 (40.4) 12 (33.3) 8 (25.8) iii) Total persons (%) 5 (13.9) 19 (40.4) 12 (33.3) 8 (25.8) iii) Total persons (%) 5 (13.9) 19 (40.4) 12 (33.3) 8 (25.8) iii) Total persons (%) 5 (13.9) 19 (40.4) 12 (33.3) 8 (25.8) iii) Total persons (%) 5 (13.9) 19 (40.4) 12 (33.3) 8 (25.8) iii) Total persons (%) 5 (13.9) 19 (40.4) 12 (33.3) 8 (25.8) iii) Total persons (%) 5 (13.9) 19 (40.4) 12 (33.3) 8 (25.8) iii) Total persons (%) 5 (13.9) 19 (40.4) 12 (33.3) 8 (25.8) iii) Total persons (%) 5 (13.9) 19 (40.4) 12 (33.3) 18 (25.8) iii) Total persons (%) 5 (13.9) 19 (40.4) 12 (33.3) 18 (25.8) iii) Total persons (%) 5 (13.9) 19 (40.4) 12 (33.3) 18 (25.8) iii) Total persons (%) 10 (40.4) 12 (33.3) 13 (40.4) ii	iv) Forestry						
V) Total	vi) Administration						
c) Number of Staff (Education level) i) University Level persons (%) 4 (11.1) 2 (4.3) 3 (8.3) 3 (9.7) ii) Technician Level persons (%) 13 (36.1) 28 (59.6) 22 (61.1) 19 (61.3) iii) Vocational Level persons (%) 19 (52.8) 17 (36.2) 11 (30.6) 9 (28.0) iv) Total persons 36 (100.0) 47 (100.0) 36 (100.0) 31 (100.0) d) Number of Staff (Sex)							
ii) Technician Level	c) Number of Staff (Education level)					, ,	
III) Vocational Level persons (%) 19 (52.8) 17 (36.2) 11 (30.6) 9 (29.9) IV) Total persons 36 (100.0) 47 (100.0) 36 (100.0) 31 (100.0) Alumber of Staff (Sex) persons (%) 31 (86.1) 28 (59.6) 24 (66.7) 23 (74.2) IV) Femal persons (%) 5 (13.9) 19 (40.4) 12 (33.3) 8 (25.8) III) Total persons (%) 5 (13.9) 19 (40.4) 12 (33.3) 8 (25.8) III) Total persons 36 (100.0) 47 (100.0) 36 (100.0) 31 (100.0) IV) Number of Modern farmers 10 Crop Production families 63 1 IV) Persons 10	i) University Level						
iv							
Number of Staff (Sex) Persons (%) 31 (86.1) 28 (59.6) 24 (66.7) 23 (74.2)							
Male		persons	36 (100.0)	47 (100.0)	36 (100.0)	31 (100.0)	
11 Femal persons (%) 5 (13.9) 19 (40.4) 12 (33.3) 8 (25.8) 111 Total persons 36 (100.0) 47 (100.0) 36 (100.0) 31 (100.0) 12 Number of Modern farmers		persons (%)	31 (86 1)	28 (59 6)	24 (66 7)	22 (74 2)	
111 Total						8 (25.8)	
e) Number of Modern farmers j) Crop Production families j) Crop Production families j) Livestock families j) Building structure (year established) ii) Number of Rooms nos 5 5 5 5 5 3 iii) Number of Tables nos 7 10 9 11 iv) Number of Chairs nos 15 30 18 30 v) Number of Cupboard nos 3 5 5 5 5 4 vi) Electric supply yes/no yes yes yes yes yes yes vii) Telephone line lines 0 1 0 0 0 viii) Fax Machine nos 0 0 0 0 0 0 ix) Computer nos 1 1 1 1 (old) 1 (old) xi) Copy machine nos 0 0 0 0 0 0 xi) Type writter nos 1 1 1 1 (old) 1 (old) xii) Stencil Printer nos 0 0 1 0 0 xiii) Stencil Printer nos 0 1 0 0 0 0 xiv) Vaccination Facility (Fridge, Ice box, etc.) sets 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	iii) Total		36 (100.0)				
I. Livestock Families							
f) Facilities i) Building structure (year established) material(year) wood (93) oncrete (renewed 94 concrete/wood (94) concrete/wood (194) iii) Number of Rooms nos 5 5 5 5 3 iii) Number of Tables nos 7 10 9 11 iv) Number of Chairs nos 15 30 18 30 v) Number of Cupboard nos 3 5 5 5 4 vi) Electric supply yes/no yes yes yes yes yes vii) Telephone line lines 0 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		families		43	27	30	
Number of Rooms		families		63	1		
Number of Rooms							
III	i) Sunding structure (year established)						
iv) Number of Chairs nos 15 30 18 30 v) Number of Cupboard nos 3 5 5 4 vi) Electric supply yes/no yes yes yes vii) Telephone line lines 0 1 0 0 viii) Fax Machine nos 0 0 0 0 0 ix) Computer nos 0							
v) Number of Cupboard nos 3 5 5 4 vi) Electric supply yes/no yes yes yes yes vii) Telephone line lines 0 1 0 0 viii) Fax Machine nos 0 0 0 0 ix) Computer nos 0 0 0 0 x) Type writter nos 0 0 0 0 xi) Copy machine nos 0 0 0 0 xii) Stencil Printer nos 0 0 1 1 (old) 1 (old) xiii) Balance/Tape for Yield test sets 0 0 1 0 xiii) Balance/Tape for Yield test sets 0 0 1 0 xiii) Balance/Tape for Yield test sets 0 0 1 0 xiv) Vecicles nos 0							
vi) Electric supply yes/no yes yes yes vii) Telephone line lines 0 1 0 0 viii) Fax Machine nos 0 0 0 0 0 ix) Computer nos 0 0 0 0 0 x) Type writter nos 1 1 1 (old) 1 (old) 1 (old) xi) Copy machine nos 0 0 0 0 0 0 xii) Stencil Printer nos 0 0 1 0<							
vii) Telephone line lines 0 1 0 0 viii) Fax Machine nos 0 0 0 0 ix) Computer nos 0 0 0 0 x) Type writter nos 1 1 1 (old) 1 (old) xi) Copy machine nos 0 0 0 0 0 xii) Stencil Printer nos 0 0 1 0 0 xiii) Balance/Tape for Yield test sets 0 0 1 0 0 xiii) Balance/Tape for Yield test sets 0 0 1 0 0 xiii) Balance/Tape for Yield test sets 1 1 1 0 xiii) Balance/Tape for Yield test sets 0 0 1 0 xiii) You Carriar nos 0 0 0 0 0 xvi You Carriar nos 0 1 0 0 0 xvii Motor Cycle <td>vi) Electric supply</td> <td></td> <td></td> <td></td> <td></td> <td></td>	vi) Electric supply						
viii) Fax Machine nos 0 0 0 0 ix) Computer nos 0 0 0 0 x) Type writter nos 1 1 1 (old) 1 (old) xi) Copy machine nos 0 0 0 0 xii) Stencil Printer nos 0 0 1 0 xiii) Balance/Tape for Yield test sets 0 0 1 0 xiii) Vaccination Facility (Fridge, Ice box, etc.) sets 1 1 1 1 xv) Camera nos 0 0 0 0 0 xvi) Vehicles nos 0 1 0 0 xvii Motor Cycle nos 2 0 3 4 (2 out of order	vii) Telephone line	'					
ix) Computer	viii) Fax Machine						
Xi) Copy machine nos 0 0 0 0 0 Xii) Stencil Printer nos 0 0 1 0 Xiii) Balance/Tape for Yield test sets 0 0 1 0 Xiv) Vaccination Facility (Fridge, Ice box, etc.) sets 1 1 1 1 Xv) Camera nos 0 0 0 0 Xvi) Vehicles nos 0 1 0 0 Xvii Motor Cycle nos 2 0 3 4 (2 out of order that the string transformer than the strin		nos	0	0	0		
Xii) Stencil Printer nos 0 0 1 0 Xiii) Balance/Tape for Yield test sets 0 0 1 0 Xiv) Vaccination Facility (Fridge, Ice box, etc.) sets 1 1 1 1 1 Xv) Camera nos 0 0 0 0 Xvi) Vehicles nos 0 1 0 0 Xvii Motor Cycle nos 2 0 3 4 (2 out of orde Xvii Motor Boat nos 2 0 0 2 (1 with engin Xiv) Bicycle nos 1 1 0 3 Benvironment a) NBCA a) NBCA b) Protected Forest					1 (old)	1 (old)	
Xiii) Balance/Tape for Yield test Sets O							
Xiv Vaccination Facility (Fridge, Ice box, etc.) Sets 1							
xv) Camera nos 0 0 0 0 xvi) Vehicles nos 0 1 0 0 xvii Motor Cycle nos 2 0 3 4 (2 out of order	xiii) Daiance/ Lape for Yield test			_1			
Xvi) Vehicles							
Xvii Motor Cycle nos 2 0 3 4 (2 out of orde							
Xviii Motor Boat nos 2 0 0 2 (1 with engin xiv) Bicycle nos 1 1 0 3							
xiv) Bicycle nos 1 1 0 3 8) Environment							
B Environment	xiv) Bicycle						
b) Protected Forest ha 0 0 0 0 c) Production Forest ha 0 0 0 96,000 d) Conservation Forest ha 2,333 1,918 90 0 e) Regeneration Forest ha 0 559 0 0	8) Environment			-	-		
b) Protected Forest ha 0 0 0 0 c) Production Forest ha 0 0 0 96,000 d) Conservation Forest ha 2,333 1,918 90 0 e) Regeneration Forest ha 0 559 0 0	a) NBCA	ha	100,000	100,000	0	0	
d) Conservation Forest ha 2,333 1,918 90 0 e) Regeneration Forest ha 0 559 0 0			0	0			
e) Regeneration Forest ha 0 559 0 0						96,000	
f) Degraded Forest ha 300			^ _	550	0		

Table	District	Inventry	(Savanakhet)

Table District Inventry (Savanakhet) Province	T		Savanakhet			
Districts	Unit	Xaibouri	Khanthabouri		Xaiphouthong	
(1) Administrative area	km2	1,110	521	1,373	512	
(2) Population a) Number of Zones			10			
b) Number of villages		89	10 94	29 142	63	
c) Number of house-hold	nos	- 67	74	142	0.3	
d) Average family size	nos					
e) Estimated population		48,355	101,953	79,938	40,169	
f) Literacy rate g) Ethnic group	%					
i) Lao Loum	persons	48,195	101 216	70.012	20.005	
ii) Lao Iheung	persons	160	101,316 464	79,813 125	39,995 174	
iii) Lao Soung	persons	0	0	0	0	
iv) Others	persons	0	173	0	0	
(3) Social infrastructure						
a) Water Supply Provision b) Electricity Provision	%	89	-	-	-	
c) No. of Primary school	nos					
d) No. of Secondary school	nos					
e) No. of High school	nos		<u> </u>			
f) No. of Hospital (No. of bed)	nos	1 (20)	2 (10)	1 (30)	1 (10)	
g) No. of Dispensary (No. of bed)	nos	10 (120)	11 (22)	10 (20)	5 (10)	
h) No. of Latrine (4) Agriculture	nos	117	-	-	-	
a) Land Use	ļ					
i) Rainted Paddy field	ha	8,567	5,930	18,617	0.015	
ii) Irrigated Paddy field	ha	6,630	634	3,083	8,215 1,485	
iii) Upland Paddy field	ha			5,005	1,703	
iv) Cultivated Levee area	ha			408	629	
v) Industrial Crop	ha	495	114	752	702	
vi) Vegetable Crop vii) Fruit Crop	ha	442	220	485	129	
b) Paddy cultivation	ha	381	42	616	108	
i) Improved Variety (Area)	ha					
ii) Improved Variety (Amount of seeds)	ton					
iii) Local Variety (Area)	ha					
iv) Local Variety (Amount of Seeds) c) Average holding size	ton					
d) Cropping schedule	ha					
i) Rain season	from/to	m May - l Dec	e Jun - l Nov	m May -l Nov	137 157	
ii) Dry season	from/to	e Dec - m May	m Nov - m May	m Nov - e May	1 May - 1 Nov m Dec - 1 Apr	
e) Yield				in rior orang	п всс - 17 фг	
i) Rain season	ton/ha	3.5	3.3	3.6	3.5	
ii) Dry season iii) Total	ton/ha	5.0	4.3	4.8	4.5	
f) Paddy farming information	ton/ha	4.3	3.8	4.2	4.0	
i) Labor input (Trans planting and Harvesting)	man-day	40.0	35.0	25 - 30	30.0	
ii) Animal power input (Land Preparation)	animal-day	34.0	20.0	9.0	42.0	
iii) Machine input (Land Preparation)	machine-day	8.0	2.0	2.0	4.0	
g) Farming practice						
i) Planting System Rainfed	TTD (F)	- Francisco				
Irrigated	TP/DS TP/DS	TP TP	TP	TP	TP	
ii) Fertilizer application	11/03	1.F	TP	TP	TP	
Wet season	kg/ha	some	some (250)	negligible	some	
Dry season	kg/ha	150 - 300	250 - 300	150 - 200	200	
iii) Mechanization						
Land Preparation Threshing	%	70%	20%-40%	50%	50%	
iv) Variety (G: glutinous, N: non-glutinous)	%	90%	10%	ND	10%	
Wet season	Imp/Loc	I=95%	I=80%	I=95%	1.050	
Dry season	Imp/Loc	I=100%	I=100%	I=95% I=100%	I=95% I=100%	
v) Seedrate		1 100/0	1-10070	1-10070	1=100%	
Wet season	kg/ha	60	60	40	50	
Dry season	kg/ha	80	80	60	80	
h) Flood affected area (Paddy field) b) Livestock and Fisheries	%	24.0	15.0	11.0	-	
a) No. of animals						
i) Buffalo	nos	17,922	14,357	36,711	11 174	
ii) Cattle	nos	27,650	21,763	49,114	11,164 13,954	
iii) Pig	nos	15,287	17,263	20,076	3,965	
iv) Poultry	nos	76,622	169,461	121,615	43,851	
b) Vaccination i) No. of buffalo vaccinated						
i) No. of buffalo vaccinated	nos	1,643	4,111	13,434	1,700	
	noc l	2,531	3,892	14,681	1,067	
ii) No. of cattle vaccinated	nos	472				
ii) No. of cattle vaccinated iii) No. of pig vaccinated	nos	473 76.622	420 160 461	80	53	
ii) No. of cattle vaccinated iii) No. of pig vaccinated iv) No. of poultry vaccinated c) Fishery activities		473 76,622	420 169,461	80 121,615	53 43,851	
ii) No. of cattle vaccinated iii) No. of pig vaccinated iv) No. of poultry vaccinated	nos					

Province				nakhet	
District	Unit	Xaibouri	Khanthabouri	Songkhaon	Xaiphouthor
6) Farm Input and Marketing	+	<u> </u>			
a) Farm Input					
i) Fertilizer used	ton	376	237	944	620
ii) Farm Yard Manure used	ton		3,271	15,938	4,871
iii) Pesticide used	Kg				
iv) No. of Pump	nos	272	501	459	501
v) No. of 2 wheel tractor	nos	1,076	327	1,455	816
vi) No. of 4 wheel tractor	nos	16	4	9	1
vii) No. of harvesting machine	nos			3	
viii) No. of hand sprayer	nos		112	73	47
b) Marketing		15	10	12	
i) No. of threshing machine ii) No. of pedestral threshing Machine	nos	15	15	13	224
iii) No. of mills	nos		207	206	234 189
c) Livestock Marketing	nos		207	206	189
i) Domestic consumption of large animals	head/year	536			
ii) Sold to other area (large animals)	head/year	1,261			
iii) Domestic consumption of pig	head/year	1,201			
iv) Sold to other area (pig)	head/year	ļ			
v) Domestic consumption of poultry	head/year				
vi) Sold to other area (poultry)	head/year				
7) DAFSO	noud, your				
a) Approximate Annual budget	Kip				
b) Number of Staff (Division)					
i) Crop Production	persons (%)	6 (14.6)	8 (15.4)	14 (21.9)	5 (17.9)
ii) Irrigation	persons (%)	3 (7.3)	2 (3.8)	7 (10.9)	2 (7.1)
iii) Livestock	persons (%)	9 (22.0)	12 (23.1)	11 (17.2)	3 (10.7)
iv) Forestry	persons (%)	16 (39.0)	25 (48.1)	21 (32.8)	12 (42.9)
vi) Administration	persons (%)	7 (17.1)	5 (9.6)	11 (17.2)	6 (21.4)
v) Total	persons (%)	41 (100.0)	52 (100.0)	64 (100.0)	28 (100.0)
c) Number of Staff (Education level)	1				
i) University Level	persons (%)	2 (4.9)	2 (3.8)	3 (4.7)	2 (7.1)
ii) Technician Level	persons (%)	28 (68.3)	39 (75.0)	37 (57.8)	17 (60.7)
iii) Vocational Level	persons (%)	11 (26.8)	11 (21.2)	24 (37.5)	9 (32.1)
iv) Total	persons (%)	41 (100.0)	52 (100.0)	64 (100.0)	28 (100.0)
d) Number of Staff (Sex)					
i) Male	persons (%)	26 (63.4)	31 (59.6)	42 (65.6)	22 (78.6)
ii) Female	persons (%)	15 (36.6)	21 (40.4)	22 (34.4)	6 (21.4)
iii) Total	persons (%)	41 (100.0)	52 (100.0)	64 (100.0)	28 (100.0)
e) Number of Modern farmers	6 3:			1	
i) Crop Production	families	71	161	150	55
ii) Livestock g) Facilities	families	4	53	15	34
		(00)	. (145)	. (1.000	(10.0)
Building structure (year established) Number of Rooms	material(year)		concrete ('45)	concrete/wood ('84)	concrete ('98)
iii) Number of Tables	nos	3	5	11 (2 buildings)	5
iv) Number of Chairs	nos	14 15	24 34	11	8
v) Number of Cupboard	nos	7	12	20	18
vi) Electric supply	nos yes/no				5
vii) Telephone line	-	yes	yes 1	yes	yes
viii) Fax Machine	lines	0	0	0	0
ix) Computer	nos	0	0	0	0
x) Type writter	nos	1 (old)	1	1	1 (old)
xi) Copy machine	nos	0	0	0	0
xii) Stencil Printer	nos	0	1	0	
xiii) Balance/Tape for Yield test	sets	j	1	0	0
xiv) Vaccination Facility (Fridge, Ice box, etc.)	sets	1	1	1	1
xv) Camera	nos	0	1 (out of order)	0	0
xvi) Vehicles	nos	0	1	0	0
xvii` Motor Cycle	nos	5 (1 out of order)	3	5 (3 out of order)	2
xviii Motor Boat	nos	0	0	0	- 0
xiv) Bicycle	nos	1	0	1	0
B) Environment	1				<u> </u>
a) NBCA	ha	0	0	100,000	0
b) Protected Forest	ha	0	0	0	0
c) Production Forest	ha	0	0	212,000	0
d) Conservation Forest	ha	0	900	226	82
e) Regeneration Forest	ha	0	0	0	0
f) Degraded Forest (forest in laterite soil)	ha		34,762		

Table 7 Resistace Levels of Paddy

Pest and Diseases	Pests			Dis	eases
	BPH	GLH	Gall midge	Blast	Leaf blight
Varieties					
Lao Improved Varieties					
TDK-1	MR	S	S	MR	MR
TDK-2	S	S	S	MR	S
TDK-3	S	S	S	MR	R
TDK-4	MS	S	S	R	R
PNG-1	S	R	S	R	MR
PNG-2	S	S	S	S	S
TSN-1	S	S	S	MR	MR
NTN-1	S	S	S	MR	S
Introduced					
RD6	S	S	S	MR	S
RD8	S	S	S	MR	S
RD10	S	S	S	S	S
KDM105	S	S	S	S	S
Hang-yi 71	S	S	S	R	S
NSG 19	S	S	S	S	S
RD23	R	S	S	S	S
IR66	R	R	U	S	MR
CR203	R	R	U	MR	MR
Traditional					
Muang-nga	S	S	MS	R	S
Dok-mai	S	S	S	S	S
Doc-tiaw	S	S	S	S	S
Mak-hing	S	S	S	S	S
Mak-yom	U	U	U	U	U
Ta-khiat	S	S	S	R	S
Nang-nuan	S	S	S	S	S
Hom Nang-nuan	S	S	S	S	S
Lay-keaw	S	S	S	S	S

Source: Lao-IRRI

R: Resistant, MR: Moderately Resistant, MS: Moderately Susceptive, S: Susceptive, U: Unknown

Table 8 Estimated farm inputs for paddy production under the Present Condition in the Wet Season

No	Particulars	Unit	Vangkong	Tonghab	Nakhua	Phontan
			1,000 -	1,500 -	1,500 -	2,800 -
	Yield	kg	2,400	2,500	2,500	3,000
	Total income	kip				
	Total costs	kip				
	Profit	kip				
	1 Input costs	kip				
	Seed	kg	60	72	72	50
	Fertilizer (16:20:0)	kg	6	0	0	(
	Fertilizer (15:15:15)	kg	0	0	0	100
	Urea	kg	6	0	0	(
	Urea	kg	0	0	0	100
	Animal manure*	kg	0	210	100	120
	Pesticides (Poridor)	cc	0	0	0	
	Furadan 3%	kg	0	0	0	. (
	2 Labor costs	kip				
	Nursery Bed Preparation	•				
	(WB),Tractor	Persons	8	15	15	1
	Land Preparation*2					
	- Tractor 1st Ploughing	Persons	3	3	3	1
*	- Tractor 2nd Ploughing and					
	Hallowing	Persons	2	1	2	2
	- Buffalo 1st Ploughing	Persons	4	0	0	
	- Buffalo 2nd Ploughing and					
	Hallowing	Persons	3	0	0	3
	Manual Weeding	Persons	0	5	5	. 5
	Seedling Removing (less than					
	30days)	Persons	0	0	0	l (
	Transplanting		30	30	40	40
	Chemical Fertilizer Application	Persons	0	0	0	2
	Manure Application	Persons	9	0	0	(
	Harvesting	Persons	38		38	30
	Threshing Manual	Persons	10		0	
	Threshing Machine (100%)	Machine	0	0	0	(
	Transportation (inc Packing)	Persons	10	8		20
	Water Keeper	Persons	0	0	0	
	Total Manday		117	92	108	
	3 Other costs	kip				
	Water Charge	mxm	0	0	0	0
	Material (Tightening)		0	0	0	0
	Fuel (Diesel for Tractor)	lit	26		40	20
	(= ====================================			32	10	20
	Total Expenses	kip				
		-				<u> </u>

^{*1:} some farmers

Unit: 1 ha

^{*2:}Mechanization ratio Vangkhong: Tractor=35% Tonghab: Tractor=100% Nakhua: Tractor=100% Phonthan: Tractor=60%

Table 9 Estimated farm inputs for paddy production under the Present Condition in the Dy Season

No	Particulars	Unit	Tonghab	Phontan
	Yield	kg	2,500 - 3,000	3,000 - 4,000
	Total income	kip		
	Total costs	kip		
	Profit	kip		
	1 Input costs	kip	-	
	Seed	kg	60	80
	Fertilizer (16:20:0)	kg	C	O
·	Fertilizer (15:15:15)	kg	200	100
	Urea	kg	5	C
	Urea	kg	100	100
	Animal manure*1	kg	C	120
	Pesticides (Poridor)	сс	300	C
	Furadan 3%	kg	C	0
	2 Labor costs	kip		
	Nursery Bed Preparation (WB), Tractor	Persons	1	1
	Land Preparation (Tractor 100%)		C	0
	- Tractor 1st Ploughing	Persons	C	0
	- Tractor 2nd Ploughing and Hallowing	Persons	2	2
	- Buffalo 1st Ploughing	Persons	C	0
	- Buffalo 2nd Ploughing and Hallowing	Persons	О	0
	Manual Weeding	Persons	5	5
	Seedling Removing (less than 30days)	Persons	O	0
	Transplanting		40	30
	Chemical Fertilizer Application	Persons	3	.3
	Manure Application	Persons	0	0
	Harvesting	Persons	30	40
-	Threshing Manual	Persons	0	0
	Threshing Machine (100%)	Machine	0	-0
	Transportation (inc Packing)	Persons	20	20
	Water Keeper	Persons	0	0
	Total Manday		101	101
	3 Other costs	kip		
	Water Charge	mxm		
·	Material (Tightening)			
	Fuel (Diesel for Tractor)	lit	16	10
	Total Expenses	kip		

^{*1:} some farmers apply.

Unit: 1 ha

under the Irrigation Condition

Table 10 Estimated farm inputs for paddy production under the with Project condition

No	Particulars	Unit	Dry	Wet (Supplem)	Wet (Rain)
	Yield	kg	5,000		
	Total income	kip			,
	Total costs	kip			
	Profit	kip			
1	Input costs	kip			
	Seed	kg	75	60	60
	Fertilizer (16:20:0)	kg	70	70	60
	Fertilizer (15:15:15)	kg	130	130	120
	Urea	kg			
- 100000	Urea	kg	130	130	70
	Animal manure*1	kg	1,000		1,000
	Pesticides (Poridor)	сс	0		0
	Furadan 3%	kg	0	0	0
2	Labor costs	kip			
	Nursery Bed Preparation (WB), Tractor	Persons	3	3	3
	Land Preparation (Tractor 100%)				
	- Tractor 1st Ploughing	Persons	3	3	3
	- Tractor 2nd Ploughing and Hallowing	Persons	2	2	2
	- Buffalo 1st Ploughing	Persons	0	0	0
	- Buffalo 2nd Ploughing and Hallowing	Persons	0	0	0
	Manual Weeding	Persons	5	5	5
	Seedling Removing (less than 30days)	Persons	5	5	5
	Transplanting		30	30	30
	Chemical Fertilizer Application	Persons	3	3	2
	Manure Application	Persons	0	0	0
	Harvesting	Persons	30	30	30
	Threshing Manual	Persons	0	0	0
	Threshing Machine (100%)	Machine	0	0	0
	Transportation (inc Packing)	Persons	10	10	10
	Water Keeper	Persons	8	8	0
	Total Manday		99	99	90
3	Other costs	kip			
	Water Charge	mxm	Yes	Yes	0
	Material (5% of Total Input excl. labor)				
	Fuel (Diesel for Tractor)	lit	25	25	25
	Total Expenses	kip			
	*1. D				

^{*1:} Recommendation

Estimated Paddy and Production under without and with Project Condition Table 11

Model Areas		Without Collainon	10000	ڒ	רארווומרנת		WITH CONDITION		Ü	Estimated
Farming Syste	Wet Season	ason	Dry Season	l	Total	Wet Season	ason	Dry Season	1	Total
-	Planted 1	arveste l	Planted 1s	ırveste ³ r	Planted larveste Planted larveste ³ roduction	Aveilablemproved Planted larveste Production	nprovec P	lanted la	veste p	roductic
	Area	Area	Area	Area		Area	Area	Area	Area	
	(ha)	(ha)	(ha)	(ha)		(ha)	(ha)	(ha)	(ha)	
1. Tongharb-Nakhua										
Paddy 467 ha	ВГ									
Rainfed	467	233				467	233			
Irrigated			73	73			83.5	167	167	
		d		Ó					ļ	
Estimated Yield (ton/ha)		7.0		7.8			3.5		2.0	1.401
Estimated Production (uction (466		201	299		816		1,253	2,068
								improvement	ment	310%
2. Vangkhong Paddy 52 ha	E									98
Rainfed	52	10				52	10			
Irrigated								09	09	
Estimated Yield		1.7					3.5		5.0	
(ton/ha)										317
		2			8		35		300	335
								improvement	ment	1895%
3. Phonthan Paddy 520 ha	ē									829
Rainfed	520	520				520	520			
Irrigation			55	55				90	06	
Estimated Yield		2.9		3.6			3.5		5.0	
(ton/ha)		(2.8 - 3.0)		(3.0 - 4.1)		"	(3.0 - 3.5)	4)	(4.5 - 5.	267
		1,508		195	1,703		1,820		450	2,270
								improvement	ment	133%

lanted area is consist of flood area and non flood area.

Harvested area means non-flood area.

Table 12 Labour Balance for a Typical Farmer (With Project) - Thongharb-Nakhua

						_≊ 	Mav	Jun	-	Ξ		Ang		8	ľ	5	Now	-	2		Lon	Total	L		-	
						-	п	Ī	п	1	I		-	H		=	-	=	337	-	=	1	=	I	-	=
		В				Propos	Proposed Cropping Pattern	ing Patte		Transmine	į					17		 		-			1		-	
			 ن						81							***************************************	*			Transplanting	planting					Harvesting
			<u> </u>	<u>=</u> _		Ham	Harvesting								Transplanting				#	Harvesting	Treat	Transplanting				
	Ą	В	ပ	Q	Э	12																				
Farm Works	(m-d/ha)	(m-d/hh)	(m-d/hh)	_	7p)	(day)							Daily F	Peak Labo	ur Regui	irement pe	r Half Mo	onth Inte	Daily Peak Labour Requirement per Half Month Interval (m-d/day)	(ac)				ĺ		
Paddy													_												-	
- Nursery	3	1,151	251	251	251 3	30		38	38										000	8	ļ.					
- Land Preparation	5	1,918	418	418	418 3	30				64	64									4	14					-
- Seeding	5	1,918	418	418	418 3	30		64	64										14	<u> </u>				-		
- Transplanting	30	11,505	2,505 2	2,505 2,	2,505	30			_	384	384									25	84		ı			-
- Basal Application	1	384	84	84	84	30				13	13										<u> </u>					
- 1st Top Dressing	-	384	2 8	48	84	30					13	13									3	3				
- 2nd Top Dressing	-	384	26	8	84	30		-		-		13 1;	13								-	3	е			ļ.
- Weeding	5	1,918	418	418	418 9	90					21	21 21	1 21	1 21	21						5	2	8	8	v	v
- Irrigating	∞	3,068		899	668 130	0				2	24	24 24	4 24	24	22					5		S	8	S	v	, v
- Harvesting	-		2,505 2	2,505 2,	2,505 30	0 84										384	384	i								28
- Others	10	3,835	835	835	835 30	0 28										128	128									8
Total	66	37,967	8,267 8	8,267 8,	8,267 490	0																				
Paddy											_	_		-			-	L		_						
- Nursery	ю	1,151	251	251	251 30	0							00	. 80						00						
- Land Preparation	5	1,918	418	418	418 30	0								41	14						1	14		-	<u> </u>	İ
- Seeding	S	1,918	418	418	418 30	C						14	4 14	**					41	14			1	i		
- Transplanting	30		2,505 2,	2,505 2,	2,505 30	0								8	84				İ		84	84				
- Basal Application	-	384	48	25	84 30	6								3	3						3	3				
- 1st Top Dressing	-	384	28	8	-	6									3	3						6	ю	İ		
- 2nd Top Dressing	1	384	_			6										3	3						3	ы		
- Weeding	5	1,918	_	_		0						i		S	5	5	5	5	'n		S	S	'n	S	5	S
- Irrigating		3,068	899	- 1	668 130									5	5	3	5	5	5		s	S	S	5	S	5
- Harvesting	$\overline{}$	11,505	2,505 2,	2,505 2,	2,505 30	0 384	384									-			84	84						
- Others	\rightarrow	3,835		835	835 30	0 128	128												28	_						
Total	6	37,967 8,267	8,267 8.	8,267 8,	8,267 490																				-	
Total Peak Labor Requirement	ement				(m-d/day)	9) 623	511	102	102	484	518 7	71 80	0 67	7 155	158	527	524	2	32 156	5 239	223	128	88	22	20	20 121
Available Labor Force per Household	er Househ	plo			(m-d/day)	ᄀ	-+	1,310	_	1,310 1,	1,310 1,310	10 1,310	0 1,310	0 1,310	1,310	1,310	1,310 1,3	1,310 1,3	1,310 1,310	1,310	1,310	1,310	-	1	_	Ľ
Labor Balance					(m-d/day)	789 (1	799	1,208	1,208	826	792 1,240	40 1,230	1,243	3 1,155	1,152	783	786 1,3	1,300 1,278	78 1,15	1,154 1,071	1,087	1,087 1,182 1,282 1,288 1,290 1,290 1,189	1,282 1	,288 1,	290 1,2	90 1,18

 $A = Labour \ requirement \ per \ ha \ (m-d/ha) \qquad B = Total \ labor \ requirement \ in \ the \ area \ (Wet)$ $D = Total \ labor \ requirement \ in \ the \ area \ (Dry \ AF)$

F = Work days for each farm work

C = Total labor requirement in the area (Dry)
E = Total labor requirement in the area (Dry Late)

383.5 ha 83.5 ha 83.5 ha 83.5 ha Paddy Wet (B)

Area

Dry (C) Dry AF (D) Dry Late (E)

Table 12 Labour Balance for a Typical Farmer (With Project) - Vangkhong

					×	May	Jun		Jul		Aug	<i>S</i> 3	Sep	Oct	ಕ	Nov		Dec		Jan	Feb	٩	Mar		Apr	
					1	п	ı	п	I				П	I	п	I	П	П	I	п	I	П	Н	П	I	П
		В			Propo	Proposed Cropping Pattern	pping	Pattern	Transpianting	38111					Harvesting	Bill										
			C																Tansı	Tanspianing	5				Harvesting	9HI
	<	œ	<u>ت</u>	0																						
Farm Works	(m-d/ha)	(m-d/ha) (m-d/hh)	(m-d/hh)	<u> </u>						Da	ily Peak	Labour	Requi	rement	per Ha	Daily Peak Labour Requirement per Half Month Interval (m-d/day)	Interva	- m - g	day)	ļ			\dagger			
Paddy				I														\vdash	-							
- Nursery	3	156	180	30			S	5										9	9							
- Land Preparation	S	260	300	30					6	6									10	10						
- Seeding	S	260	300	30			6	6									-	10 10								
- Transplanting	30	1,560	1,800	30					52	52									9	8						
- Basal Application		52	99	30					7	7									2	2						
- 1st Top Dressing	1	52	09	30						2	2									. 7	2					
- 2nd Top Dressing	1	52	09	30							2 2				,						2	2				
- Weeding	ď	260	300	06						3	3 3	3	3	က		!				3	3	3	3	æ	က	
- Irrigating	8	416	480	130					3	8	3	3	3	9					4	4	4	4	4	4	4	
- Harvesting	30	1,560	1,800	30	99										52	52										90
- Others	10	520	009	30	20										17	17										20
Total	66	5,148	5,940	490																						
Total Peak Labor Requirement	ment		u)	(m-d/day)	80	0	14	14	99	70 1	10 2	9	9	9	69	69	0 1	16 16	5 76	81	11	6	7	7	7	8
Available Labor Force per Household	Honseho	pk:	n)	(m-d/day)	92	92	92	92	92	92 9	92 92	92	92	92	92	62	92 9	92 92	2 92	92	92	92	92	92	92	92
Labor Balance			u)	(m-d/day)	12	92	78	8/	56	21 8	82 89	98	98	98	22	22	92 7	92 92	5 16	=	81	8	85	85	85	12
																									1	

A = Labour requirement per ha (m-d/ha)

B = Total labor requirement in the area (Wet)

B = Total labor requirement in the area (Dry)

D = Work days for each farm work

Paddy Wet (B)
Dry (C) Area

52 ha 60 ha

Table 12 Labour Balance for a Typical Farmer (With Project) - Phonthan

					Мау	ly VI	Jun		Ja -		Aug	Sep	۵	Oct		Nov		Dec	ſ	Jan	Feb		Mar		Apr
					-	=			=	-	=	-	=	-	=	ППП	I I	=	-	=	-	Ħ	-	=	
					Propose	Proposed Cropping Pattern	ng Patte		Transplanting	540			· · · · · ·	***	Harvesting	Zun									
																									
																			Tans	Transplanting					Harvestine
	∢	В	Ü	D				-			-														
Farm Works	(m-d/ha)	(m-d/hh)	(m-d/hh)	(day)						Daily	Peak La	bour Re	quireme	ent per l	Talf Mo	Daily Peak Labour Requirement per Half Month Interval (m-d/day)	/p-m) la/	lay)			<u> </u>			-	
Paddy														-			_	<u> </u>	ļ		-			-	+
- Nursery	3	1,560	270	30			52	52										6 6							
- Land Preparation	'n	2,600	450	30				- ×0	87 87	7					-				15	15				-	
- Seeding	3	2,600	450	30			87	87									15	15							
- Transplanting	30	15,600	2,700	30				520	0 520										8	8				-	
- Basal Application	1	520	96	33				1	17 17	1									6	3					
- 1st Top Dressing	П	520	06	30					17	7 17										3	ю				
- 2nd Top Dressing	1	520	8	30						17	17										6	т			
- Weeding	5	2,600	450	8					29	29	53	29	53	59						3	'n	S	S	'n	S
- Irrigating	∞	4,160	720	130				3	32 32	32	32	32	32	32					9	9	9	9	9	9	9
- Harvesting	30	15,600	2,700	30	8					1					520	520							 		06
- Others	10	5,200	006	30	30		_	_							173	173									30
Total	66	51,480	8,910	490																					
Total Peak Labor Requirement	ement		u)	(m-d/day)	120	0	139 1:	139 656	6 702	96	2	61	19	61	693	693	0 24	22	114	122	17	14	11	11	11 120
Available Labor Force per Household	er Househol	밀	٥	n-d/day)	1,310	(m-d/day) 1,310 1,310 1,310 1		310 1,310 1,310	0 1,310	1,310	1,310	1,310	1,310	1,310	,310 1,	1,310 1,310 1,310 1,310 1,310 1,310 1,310 1,310 1,310 1,310	1,310	1,310	1,310	1,310	1,310 1,310 1,310 1,310 1,310 1,310 1,310	310 1.	310 1,3	10 1.3	⊷
Labor Balance			(n	n-d/day)	1,190	(m-d/day) 1,190 1,310 1,171 1,	171 1,1	171 654	4 608		1,308	1,214 1,308 1,249 1,249 1,249	1,249		617	617 1,310 1,286 1,286 1,197 1,189 1,294 1,297 1,300 1,300 1,300 1,190	1,286	1,286	1,197	1,189	1,294 1,	297 1.	300	00 1,3	00
								ł	1				1	4		1	2	1,400	1777	1,107	,,,,,	1,7	1,	5۱	, ,

B = Total labor requirement in the area (Wet) A = Labour requirement per ha (m-d/ha)

D = Work days for each farm work B = Total labor requirement in the area (Dry)

Wet (B) Dry (C)

Area Paddy

520 ha 90 ha

Table 13 Demand and Supply Forecast of Paddy

Import of Rice

Items		Unit	1990	1991	1992	1993	1994	1995	1996
Rice 1 Imp	ort Amount	(ton)	30,000	26,100	6,190	8,410	16,450	26,900	23,800
2 Imp	ort Value	(US\$1,000)	7,200	5,900	2,956	2,944	6,600	11,000	10,305

Source: FAO Trade Year Book, 1992-96, Ministry of Agriculture and Irrigation

Percapita Consumption (kg/ye	ar/person)	350	350	325	300	275	250
Year		1995	2000	2005	2010	2015	2020
Population forecast	Case-1	4,600,000	5,200,000	5,900,000	6,800,000	7,700,000	8,700,000
	Case-2	4,600,000	5,100,000	5,800,000	6,400,000	7,100,000	7,700,000

Case-1	(kg)						(Unit: ton)
Percapita consumption	350	1,610,000	1,820,000	1,917,500	2,040,000	2,117,500	2,175,000
Buffer stock		483,000	546,000	575,250	612,000	635,250	652,500
Total		2,093,000	2,366,000	2,492,750	2,652,000	2,752,750	2,827,500
Case-2							
Percapita consumption	350	1,610,000	1,785,000	1,885,000	1,920,000	1,952,500	1,925,000
Buffer stock		483,000	535,500	565,500	576,000	585,750	577,500
Total		2,093,000	2,320,500	2,450,500	2,496,000	2,538,250	2,502,500

in Paddy

Paddy	Production	Forecast

1 ddd) 1 foddelfoli f ofecast						
The Wet Season	2.9 (ha)	450,000	562,500	712,500	862,500	900,000
	(ton)	1,305,000	1,631,250	2,066,250	2,501,250	2,610,000
The Dry Season	3.9 (ha)	55,000	141,250	227,500	313,750	400,000
	(ton)	214,500	550,875	887,250	1,223,625	1,560,000
Total Planted Area	(ha)	505,000	703,750	940,000	1,176,250	1,300,000
Production	ton	1,519,500	2,182,125	2,953,500	3,724,875	4,170,000
Production after reduct of Loss	ton	1 367 550	1 963 913	2 658 150	3 353 388	2 752 000

Seeds	30,300	42,225	56,400	70,575	70.000
Emargency	9,090	12,668	16,920	21.173	78,000 23,400
Total	39,390	54,893	73,320	91,748	101,400

	2000	2005	2010	2015	2020
Demand (Case-1)	2,405,390	2,547,643	2,725,320	2,844,498	2,928,900
Demand (Case-2)	2,359,890	2,505,393	2,569,320	2,629,998	2,603,900
Supply	1,367,550	1,963,913	2,658,150	3,352,388	3,753,000

		2000	2005	2010	2015	2020
Demand Case-1	Consumption	1,820,000	1,917,500	2,040,000	2,117,500	2,175,000
Demand Case-1	Emargency	546,000	575,250	612,000	635,250	652,500
Demand Case-1	Seed	30,300	42,225	56,400	70,575	78,000
Demand Case-1	Buffer stock	9,090	12,668	16,920	21,173	23,400
Demand Case-2	Consumption	1,785,000	1,885,000	1,920,000	1,952,500	1,925,000
Demand Case-2	Emargency	535,500	565,500	576,000	585,750	577,500
Demand Case-2	Seed	30,300	42,225	56,400	70,575	78,000
Demand Case-2	Buffer stock	9,090	12,668	16,920	21,173	23,400

Figure 1 Proposed Crop Calendar for Paddy

