3. PARTICIPATORY RURAL APPRAISAL OF LOWER ING BASIN

3 PARTICIPATORY RURAL APPRAISAL OF LOWER ING BASIN

3.1 Village Profile

Village Level Data from Village Document (Khor Chor Chor 2 Khor, 1996) from the Department of Community Development, Ministry of Interior.

(1) Land Use

Table 3.1.1. Village Area (rai) (Q.26-5)

Village Name	Total Area	Farmland	Community Forest
Ban Nong Bua	3,960	2,860	23
Ban Huai Pheung	570	465	13
Ban Wiang Wai	3,500	2,000	80
Ban Nong Sao	4,774	3,700	200
Ban Mai Don Kaew	4,486	1,851	-
Ban Pak Ing Tai	1,000	600	120
Total	18,290	11,476	120

(2) Demography

Table 3.1.2. Number of Household, Village Population and Sex Ratio (Q.1-3).

Village Name	No. of Household	Total Population	Male	Female
Ban Nong Bua	84	395	182 (46.1%)	213 (53.9%)
Ban Huai Pheung	105	416	222 (53.4%)	194 (46.6%)
Ban Wiang Wai	173	935	483 (51.7%)	452 (48.3%)
Ban Nong Sao	188	1,109	551 (49.7%)	558 (50.3%)
Ban Mai Don Kaew	178	722	384 (53.2%)	338 (46.8%)
Ban Pak Ing Tai	178	898	453 (50.4%)	445 (49.6%)
Total	906	4,475	2271.955 (50.8%)	2197.045 (49.2%)

Table 3.1.3. Age Group of Population (Q.1-3).

Village Name	under 6 y	6-12 yrs	12-18 yrs	18-50 yrs	50-60 yrs	over 60 y	Total
Ban Nong Bua	34 (8.6 %)	57 (14.4 %)	64 (16.2 %)	181 (45.8 %)	39 (9.9 %)	20 (5.1 %)	394
Ban Huai Pheung	22 (5.3 %)	49 (11.8 %)	48 (11.5 %)	228 (54.8 %)	34 (8.2 %)	35 (8.4 %)	415
Ban Wiang Wai	77 (8.2 %)	62 (6.6 %)	121 (12.9 %)	562 (60.1 %)	66 (7.1 %)	47 (5.0 %)	934.001
Ban Nong Sao	90 (8.1 %)	149 (13.4 %)	148 (13.3 %)	613 (55.3 %)	47 (4.2 %)	62 (5.6 %)	1108.001
Ban Mai Don Kaew	52 (7.2 %)	56 (7.8 %)	104 (14.4 %)	418 (57.9 %)	58 (8.0 %)	34 (4.7 %)	721
Ban Pak Ing Tai	78 (8.7 %)	111 (12.4 %)	127 (14.1 %)	468 (52.1 %)	52 (5.8 %)	62 (6.9 %)	897
Total	353 (7.9 %)	484 (10.8 %)	612 (13.7 %)	2470 (55.2 %)	296 (6.6 %)	260 (5.8 %)	4469.002

(3) Socio-economy

Table 3.1.4. Yearly Income (Q 10).

Village Name	No. of Total Household	HH with more than 1 Occupation		HH with only 1 occupation	
		No. of HH	Average Income/Year	No. of HH	Average Income/Year
Ban Nong Bua	84	76	15,000 Baht	8	15,000 Baht
Ban Huai Pheung	105	97	50,000 Baht	8	10,800 Baht
Ban Wiang Wai	173	35	18,000 Baht	138	10,000 Baht
Ban Nong Sao	188	188	15,000 Baht	0	-
Ban Mai Don Kaew	178	178	50,000 Baht	0	-
Ban Pak Ing Tai	178	172	14,000 Baht	6	15,000 Baht
Total	906	746	-	160	

Table 3.1.5. Out-migration for Employment (Q36).

Village Name	No. of People Working Outside the Tambon			Age Range (years)		Location and Duration	
	male	female	total	male	female	Location	Duration
Ban Nong Bua	48	38	86	15 -50	15 - 44	Bangkok	Off-farm period
Ban Huai Pheung	20	13	33	18 - 45	18 - 35	Bangkok	More than 3 M
Ban Wiang Wai	21	21	42	18 - 35	18 - 35	Bangkok	More than 3 M
Ban Nong Sao	20	20	40	18 - 35	18 - 35	Same province	Off-farm period
Ban Mai Don Kaew	12	18	30	23 - 45	18 - 40	Bangkok	More than 3 M
Ban Pak Ing Tai	23	12	35	15 - 45	15 - 20	Other region	More than 3 M
Total	144	122	266				

Table 3.1.6. Land Ownership (Q.26-1.2.3).

Village Name	No. of HH with Own Land Only	No. of HH with Own Land & Rented Land	No. of HH with Rented Land Only	Major Owner of Rented Land
Ban Nong Bua	50	9	25	Villagers
Ban Huai Pheung	78	10	9	Villagers
Ban Wiang Wai	46	12	80	Villagers
Ban Nong Sao	81	82	13	Villagers
Ban Mai Don Kaew	95	50	33	Parents/Relatives
Ban Pak Ing Tai	130	33	15	Villagers
Total	480	196	175	-

(4) Agriculture

Table 3.1.7. Number of Farming HH, number of Paddy Growing HH and Yield of Paddy (Q 9-6, 11-1, 11-3).

Village Name	No. of Household	No. of Farming Household	No. of Paddy Growing Household	Yield of Paddy per Rai
Ban Nong Bua	84	83	76	400 kg/rai
Ban Huai Pheung	105	97	97	500 kg/rai
Ban Wiang Wai	173	138	138	400 kg/rai
Ban Nong Sao	188	188	188	N.A.
Ban Mai Don Kaew	178	150	150	500 kg/rai
Ban Pak Ing Tai	178	170	30	250 kg/rai
Total	906	826	679	-

Table 3.1.8. Number of Paddy Growing Household by the Size of Field Area (Q.11-1).

Village Name	Below 1	1-5 rai	6-10 rai	11-20 rai	21-50 rai	Over 50	Total
Ban Nong Bua	0	6	50	20	0	0	76
Ban Huai Pheung	0	0	80	15	2	0	97
Ban Wiang Wai	0	30	5	80	20	3	138
Ban Nong Sao	0	0	26	92	63	7	188
Ban Mai Don Kaew	0	0	30	70	50	0	150
Ban Pak Ing Tai	0	7	20	3	0	0	30
Total	0	43	211	280	135	10	679

The "Number of Household by Paddy Field Size" header spans the six size columns.

Table 3.1.9. Major Crops (Number of Households) (Q.11,12,13,14,15,16,17,18).

	No. of Farm Household	Paddy	Maize animal feed	Maize consumption	Orchard	Others
Ban Nong Bua	83	76	30	-	5	cassava (12)
Ban Huai Pheung	97	97	-	-	-	garlic (80)
Ban Wiang Wai	138	138	-	-	-	beans (20)
Ban Nong Sao	188	188	-	182	-	-
Ban Mai Don Kaew	150	150	-	30	8	-
Ban Pak Ing Tai	170	30	-	172	20	peas (120) tobacco (20)
Total	826	679	30	384	28	

Table 3.1.10. Cropping Area of Farmland and Factor Preventing its Optimal Use (Q 25-1.2).

Village Name	% of Cropping Area of Farmland	Factor Preventing its Optimal Use
Ban Nong Bua	Between 50 and 74 %	Inundation of land
Ban Huai Pheung	More than 90 %	Financially not beneficial
Ban Wiang Wai	More than 90 %	Inundation of land
Ban Nong Sao	Between 75 and 90 %	Inundation of land
Ban Mai Don Kaew	More than 90 %	Shortage of water
Ban Pak Ing Tai	More than 90 %	Financially not beneficial

Table 3.1.11. Water for Agriculture (Q. 2-4).

	For the second paddy	For short life plantations	For long life plantations	For vegetables and flowers	For orchard
Ban Nong Bua	inadequate	-	-	-	-
Ban Huai Pheung	-	inadequate	-	-	-
Ban Wiang Wai	inadequate	inadequate	inadequate	adequate	inadequate
Ban Nong Sao	-	-	-	-	-
Ban Mai Don Kaew	-	inadequate	inadequate	inadequate	inadequate
Ban Pak Ing Tai	inadequate	inadequate	inadequate	inadequate	inadequate

"-" No cultivation of the crop

Table 3.1.12. Dry Season Farming (Q.19).

	No. of Farming HH	Agriculture Activity in Dry Season	No. of HH with Agriculture Activity in Dry Season	Source of Water in Dry Season
Ban Nong Bua	83	No	0	-
Ban Huai Pheung	97	No	0	-
Ban Wiang Wai	138	No	0	-
Ban Nong Sao	188	No	0	-
Ban Mai Don Kaew	150	No	0	-
Ban Pak Ing Tai	170	Yes	175	surface water

(5) Drinking and Domestic Water and Electricity

Table 3.1.13. Electricity and Drinking Water (Q. 2-2.3, 5-1).

	Total Number of HH	HH with Clean Drinking Water throughout the Year		HH with Adequate Domestic Water throughout the Year		HH with Electricity Supply	
		No. of HH	(%)	No. of HH	(%)	No. of HH	(%)
Ban Nong Bua	84	0	0	84	100	84	100
Ban Huai Pheung	105	105	100	105	100	105	100
Ban Wiang Wai	173	158	91.3	173	100	158	91.3
Ban Nong Sao	188	188	100	188	100	188	100
Ban Mai Don Kaew	178	22	12.4	178	100	168	94.4
Ban Pak Ing Tai	178	70	39.3	70	39.3	178	100
Total	906	543	59.9	798	88.1	881	97.2

Table 3.1.14. Source of Water (Q.2)

Village Name	Village Water Supply System		Deep Well		Shallow Well		Surface Water	
	Yes/No	HH*	Public	Private	Public	Private	No.	Type
Ban Nong Bua	No	-	1	4	12	1	2	river, stream
Ban Huai Pheung	Yes	105	3	1	2	12	1	pond
Ban Wiang Wai	Yes	158	6	-	2	21	4	river, dam, canal
Ban Nong Sao	Yes	175	4	-	7	74	4	stream, canal, spring
Ban Mai Don Kaew	No	-	4	-	3	150	1	stream, canals
Ban Pak Ing Tai	No	-	7	-	3	2	3	swamp, pond
Total			25	5	29	260	15	

*Number of households using Water Supply System throughout the year.

(6) Education

Table 3.1.15. Educational Facilities in the Village (Q3-9.10.11.12.16).

Village Name	Educational Facilities in the Village				
	Pre-school	Primary School	Secondary School	Non-formal Education Centre	Public/School Library
Ban Nong Bua	Yes	Yes	No	No	Yes
Ban Huai Pheung	No	Yes	No	No	No
Ban Wiang Wai	Yes	Yes	No	No	Yes
Ban Nong Sao	Yes	Yes	No	No	Yes
Ban Mai Don Kaew	No	-*	-*	No	Yes
Ban Pak Ing Tai	Yes	Yes	No	No	Yes

* Though no indication is given in Khor Chor Chor 2 Khor 1996, from the site survey Pak Ing Tai has both primary and secondary school.

Table 3.1.16. Number of Villagers in School (Q. 27.2).

Village Name	Educational Level						
	Pre-school	Primary school	Complete Primary*	Year 7 at Secondary School	Lower Secondary School	Higher Secondary School	Higher than Secondary
Ban Nong Bua	22	50	11	10	18	40	-
Ban Huai Pheung	12	51	9	9	6	4	-
Ban Wiang Wai	48	88	18	18	56	43	10
Ban Nong Sao	61	124	18	18	35	75	8
Ban Mai Don Kaew	31	77	12	12	43	28	11
Ban Pak Ing Tai	20	107	15	11	6**	6	-
Total	194	497	83	85	158	196	29

*The number of students who completed Primary School at the end of the previous academic year.
** Khor Chor Chor 2 Khor, 1996 states 6, but it is contradictory to the figure given in the previous column.

(7) Health

Table 3.1.17. Health Facilities in the Village (Q.3-6.8).

Village Name	Community Health Centre	Child Development / Nutrition Centre
Ban Nong Bua	Yes	Yes
Ban Huai Pheung	Yes	No
Ban Wiang Wai	No	Yes
Ban Nong Sao	Yes	Yes
Ban Mai Don Kaew	Yes	Yes
Ban Pak Ing Tai	Yes	Yes

Table 3.1.18. Health Services (Q.34).

Village Name	Vaccination to Babies*	Vaccination to Children**	Tetanus Vacc. to Pregnant Women	Delivery with Professional Assistance	Use of Contraceptive Measures***
Ban Nong Bua	100%	100%	100%	100%	100%
Ban Huai Pheung	100%	100%	100%	100%	100%
Ban Wiang Wai	100%	100%	100%	100%	94%
Ban Nong Sao	100%	100%	100%	100%	68%
Ban Mai Don Kaew	100%	100%	100%	100%	94%
Ban Pak Ing Tai	100%	100%	100%	100%	63%

* Vaccination against diphtheria, tetanus, polio, measles and tuberculosis for children under the age of 1.
** Vaccination against diphtheria, tetanus, typhoid and tuberculosis for children in primary school.
*** For married couples, whose wife is between 15 and 44 years old.

Table 3.1.19. Nutritional Condition of Children under 5 Years (Q.31).

Village Name	Normal	Level 1 (slight)	Level 2 (medium)	Level 3 (severe)
Ban Nong Bua	0	7	3	0
Ban Huai Pheung	14	7	0	0
Ban Wiang Wai	55	4	0	0
Ban Nong Sao	41	23	1	0
Ban Mai Don Kaew	39	0	0	0
Ban Pak Ing Tai	36	15	1	0
Total	185	56	5	0

(8)   Housing and Sanitary Conditions

Table 3.1.20. Roof, Toilet and Kitchen (Q.7).

Village Name	Number of HH	Roof Material			Toilet Facility			Sanitary Kitchen
		Tile or Conc.	Zinc or Metal	Nipa or Grass	Modern Type*	Native Type**	No Toilet	
Ban Nong Bua	84	56	28	0	44	0	40	80
Ban Huai Pheung	105	69	35	1	102	0	3	100
Ban Wiang Wai	173	80	89	4	173	0	0	130
Ban Nong Sao	188	56	126	6	177	0	11	151
Ban Mai Don Kaew	178	120	58	0	178	0	0	178
Ban Pak Ing Tai	178	85	67	26	178	0	0	168
Total	906	466	403	37	852	0	54	807

* A toilet with a septic tank. ** A toilet made of a hole

3.2   Interview Survey Form

Questionnaire Format of Interview Survey

No. _____

Date. _____

THE STUDY ON KOK-ING-NAN WATER DIVERSION PROJECT
IN THE KINGDOM OF THAILAND

QUESTIONNAIRE FOR THE BASELINE SURVEY
ON
THE SOCIO-ECONOMIC CONDITIONS OF THE
VILLAGES AND VILLAGERS' INTENTIONS ON
THE COMMUNITY DEVELOPMENT

Sample No.   _____

Month/Day/Year

Name of Respondent: Date:

Changwat: _____   _____

Amphoe: _____   Name of
                                    Enumerator: _____
Tambon: _____

Muban: _____   Name of
                                    Supervisor: _____

QUESTIONNAIRE

SECTION I: GENERAL INFORMATION

Q1 Civil status a) Single   b) Married c) Widow   d) Separated

Q2 Sex: a) Male   b) Female

Q3 Age: _____

Q4 Number of household members: _____

Q5 Place of ancestral origin (Changwat)   _____

Q6 Ethnic group: _____

Q7 Language in daily life: _____

Q8 Household members in the same house including the respondent and temporary absentees.

	a) Sex (M/F)	b) Age	c) Education (accomplished)	d) Main Occupation	e) Present/ Absent (P/A)	f) Relation
1.						
2.						
3.						
4.						
5.						
6.						
7.						
8.						
9.						
10.						

Notes:
* "P" means he/she lives in the house throughout the year.
  "A" means he/she lives in other places more than 3 months in a year.
** Relation to the Respondent (wife, son/daughter, mother/father, etc.)

(c) Code for education:
NE-Non formal education
PS-Primary school
JH-Junior high school
SH-Senior high school
CO-College
UN-University

(d) Code for occupation:
FA-Farmer
PO-Public official (specify): _____
SW-Salary worker (specify): _____
WW-Wage worker (specify): _____
PB-Private business (specify): _____
ST-Student
CH-Child (below school age)
PR-Pension receiver
NJ-No job
(including house keeping)

Q9 Religion:
    a) Buddhist:
    b) Christian (specify the sect):   _____
    c) Hindu:
    d) Others (specify):   _____
    e) Animism:

SECTION II: LIVING CONDITIONS

Q10 Major income sources of the family

(Please indicate the order of importance:1,2,3...and annual income for each source)

	Importance	Annual Income (Bt.)
a) Selling Rice		
b) Selling Crop such as maize, cassava		
c) Selling fruits		
d) Selling vegetables		
e) Selling fish		
f) Selling livestock/dairy products		
g) Selling forestry products		
h) Salary from permanent job		
i) Wage from temporary job		
j) Pension		
k) Remittance from family member		
l) Private business (Specify: _____)		
m) Others (Specify: _____)		

Q11 Annual expenditure: _____ Bt.

Q12 Actual debt amount: _____ Bt.

Q13 Actual saving amount: _____ Bt.

Q14 Drinking water

1) Type of drinking water (more than one answer possible)
   a) Shallow well   e) Spring
   b) Deep well   f) Village water supply
   c) River   g) Others (Specify):
   d) Rain water   _____

2) Any problem concerning drinking water?

_____

Q15 Source of fuel for cooking

1) Type of fuel for cooking
   a) Fuel wood   b) Charcoal   c) Gas
   d) Other (specify):   _____

2) Any problem concerning fuel for cooking?

_____

Q16 Source for lighting
   a) Electricity   b) Electricity (privately generated)
   c) Oil lamp   d) Candle
   e) Other (specify):   _____

Q17 Family assets/appliances

Q17-1) Assets/application owned
   a) Radio   k) Vehicle
   b) TV   k-1) Car (sedan & pick-up types)
   c) Tape recorder   k-2) Truck
   d) Refrigerator   k-3) Motorcycle (include Tricycle)
   e) Electric fan   k-4) Bicycle
   f) Electric iron   k-5) Others
   g) Sewing machine   l) House
   h) Washing machine   m) Others (specify):
   i) Toilet   _____

Q17-2) Assets/application hoping to buy:
   (more than one answer possible)   _____

Q18 Organisations

Q18-1) Are you (or your family) a member of any organisations?

a) Farmers' group (specify its activities): _____

_____

b) Social or ethnic organisation (specify): _____

_____

c) Religious organisation (specify): _____

_____

d) Others (specify): _____

e) Non-member: _____

Q18-2) What are important organisations in your community?

1) _____

2) _____

3) _____

Q19 Existence of "reciprocal custom" in your society
a) Yes (specify): _____
b) No

Q20 How the "weak" (elder, widow, children, disabled) persons are treated in the community?

_____

_____

_____

Q21 Occurrence of natural disasters in your area (more than one answer possible)
a) Flood
b) Drought
c) Wind damages
d) Erosion
e) Landslide
f) Others (specify): _____

Rank in order of seriousness

1	2	3	4	5	6	7

Q22 How do you manage waste water?

_____

_____

Q23

Q23-1) What is the main source of protein? (more than one answer possible)
a) cow beef   e) fish
b) buffalo beef   f) egg
c) chicken   g) others
d) pork

Q23-2) How often do you have protein?   _____/week

Q24 What are the most immediate concerns in your life, at present?

_____

_____

SECTION III: GENERAL AGRONOMY

Q25 Land Tenure and land use

(unit: rai)

	a) Owned	b) Family-owned	c) Leased out	d) Leased in	e) Share-cropped
1. Paddy Land					
2. Upland					
3. Orchard					
4. Vegetable					
5. Residential					
6. Others (specify)					
6-1					
6-2					
6-3					
7. Total land size					

Q26 Soil Structure
     a) silt soil
     b) sand-silt soil
     c) sand soil
     d) mountain soil

Q27 Soil Characteristics
     a) big granule
     b) medium granule
     c) small granule

Q28 Location and number of farm parcels

	Location	a)Area (rai)	b) No. of parcel
1.	Upland (Flat)		
2.	Upland (Sloping)		
3.	Lowland		
4.	Swamp		
5.	Total		

Q29 Agricultural machines & tools and draft animal

	Number (Owned)	Use (Yes or No)
1. Tractor (Cultivator)		
2. Harrow		
3. Thresher		
4. Hoe		
5. Tiller		
6. Hand sprayer		
7. Trailer		
8. Sickle		
9. Milling machine		
10. Sprayer		
11. Water Pump		
12. I-Tan Truck		
13. Other (specify)		
13-1		
13-2		
13-3		
14. Draft animal		
14-1 Buffalo		
14-2 Cow		

Q30 Live-Stock - Type of animal.

	Number
Cow	_____
Buffalo	_____
Pig	_____
Chicken	_____
Duck	_____
Other (specify) _____	_____

Q31 Do you have aquatic cultivation?
    a) Yes   b) No
        a-1) Type of aquatic animal   _____
        a-2) Size of Pond   _____
        a-3) Number of Ponds   _____
        a-4) Feed   _____

Q32

    Q32-1) Aquatic Cultivation Problem
    a) have   b) not have
    if have problem (specify)
      Disease   _____
      Market   _____
      Flood   _____
      Thief   _____
      Other (specify)   _____

    Q32-2) If they have the loan from the Bank for Agriculture and Co-operatives, do you
           want the loan for digging pond?
    a) Yes   b) No

Q33 Major agronomic constraints/problems (Rank in order of importance)

    a) Lack of land to be cultivated (specify):
    _____

    b) Lack of irrigation water (specify):
    _____

    c) Poor drainage (specify):
    _____

    d) Lack of fund (specify):
    _____

    e) Poor marketing system (specify):
    _____

    f) Insufficient farm inputs (specify):
    _____

g) Irregular topography of the land (specify):

_____

h) Poor soil (specify):

_____

i) Poor management (specify):

_____

j) Insects (specify):

_____

k) Plant Diseases:

_____

l) Others (specify):

    l-1   _____

    l-2   _____

Rank in order of importance

1	2	3	4	5	6	7

Q-34 Planted area and yield

	Planted Area (rai)		Yield (ton or kg/rai)	
	Wet Season	Dry Season	Wet Season	Dry Season
1. Rice				
2. Upland rice				
3. Maize				
4. Groundnut				
5. Cotton				
6. Cassava				
7. Vegetables				
7-1				
7-2				
7-3				

	Cultivation area (rai)	Production (kg/rai)
8. Orchard		
8-1		
8-2		
8-3		
9. Others (specify):		
9-1		
9-2		
9-3		

Q35 Agricultural inputs

	Name	Crops	a) Volume (kg, l)/rai	b) Price Bt./(kg, l)	c) Value Bt.
1. Insecticide					
1-1					
1-2					
2. Herbicide					
2-1					
2-2					
3. Fungicide					
3-1					
3-2					
4. Rodenticide					
4-1					
4-2					
5. Manure/ Fertiliser					
5-1					
5-2					

6. Where and how do you obtain those?

_____

_____

Q36 How do you market the product?
a) By the farmers
b) Through middleman
c) Others (specify): _____

Q37 Are you normally satisfied with selling price?
a) Yes   b) No

Q38 What are the easily sold crops?

a) _____

b) _____

c) _____

Q39

Q39-1) Do you take any post harvest measures on your farm?
a) Yes   b) No

Q39-2) In Case of "Yes" please mention the treated crop and its activities.

_____

_____

Q39-3) In Case of "No" Do you want any post-harvest technology on your farm?
a) Yes   b) No

Because _____

_____

Q40 Price determination

a) Fix through bargaining
b) Follow the market price (given by the customer)
c) Others (specify): _____

_____

Q41 How do you choose the customers to sell?
a) Reasonable price
b) Connection with potentates (influential person)
c) Approached by the customers
d) No reasons
e) Others (specify): _____

_____

Q42 How do you make access to the marketing information?
    a) Radio
    b) TV economic news
    c) Newspaper
    d) Word-of-mouth communication
    e) Co-operative or farmers' groups (specify): _____

_____

    f) Others (specify): _____

_____

Q43 What kind of agriculture extension and promotion news source do you interest and access?
    a) Radio, programme _____
    b) TV, program _____channel _____
    c) Newspaper, name _____ column _____
    d) Meeting by government organisation
    e) Meeting by private organisation
    f) Publishing, magazine, etc.
    g) Neighbour suggestion
    h) Academic site seeing

Q44

    Q44-1) Major marketing problems (more than one answer possible)
    a) Large fluctuation of price
    b) Lack of storage facilities
    c) Low demand of product
    d) Lack of means of transportation
    e) Bad road
    f) Middlemen
    g) Lack of market
    h) No technology and fund to process and preserve
    i) Others (specify):

        i)-1   _____

        i)-2   _____

Rank in the order importance

1	2	3	4	5	6	7	8

    Q44-2) Some Kind of "Agriculture Information Centre" will be required?
    a) Yes   b) No

Q45 Rural credit
    Q45-1) Do you make use of the rural credit?
    a)   Yes (specify the name of credit): _____
    b)   No

Q45-2) How much do you borrow?
a) Actual amount: _____ Bt.
b) Cumulative amount: _____ Bt.

Q45-3) Credit conditions
a) Interest: _____ %/year
b) Grace period: _____ Years
c) Repayment period: _____ Years

Q45-4) Main use of credit:

_____

Q46 If there is enough water in dry season, do you want to grow plants?
a) Yes   b) No
Because _____

What would you grow?

1. _____

2. _____

3. _____

Q 47 Would you like to have water pumped?
a) Yes   b) No

SECTION IV: PEOPLE'S PERCEPTION AND NEEDS

Q 48   Do you often have the occasion to discuss about the rural development project(s) with
your community (group) members?
a) Yes   b) No

Q 49   In case of "Yes" what are the major topics or agenda in the above discussions?

a) _____

b) _____

c) _____

Q 50   In last five years, what kinds of programs/projects were or are being implemented by the local, regional and central governments in your area/region?

a) _____ (year: 19 __)

b) _____ (year: 19 __)

c) _____ (year: 19 __)

d) _____ (year: 19 __)

e) _____ (year: 19 __)

f) _____ (year: 19 __)

Did you receive any benefits from this (or these) project(s)? What kind of benefits are they?

Positive

a) _____

b) _____

c) _____

d) _____

Negative

a) _____

b) _____

c) _____

d) _____

Q 51   Do you have any opinions on the project formulation process, project site, selection of beneficiaries and so on? If any, please state frankly.

_____

_____

Q 52   During the project planning and implementation period, did you have a chance to state
your opinion and expectations at the initial stage?
a) Yes   b) No
c) In case of "Yes" what was its content?

_____

Reason for the above answer:

_____

Q 53

Q53-1) Presently, what kinds of projects/ programs do you expect the most benefit in
       your area?

a) Agriculture sector (rice culture, secondary crops, vegetables, fruit, inland fishery,
livestock, irrigation etc.)

a)-1 _____

a)-2 _____

a)-3 _____

Q53-2) Livelihood/ Income generation   (agro-industry, processing, motorcycle repair,
       metal fabrication, brick laying, carpentry & joinery, dress making, hair dressing,
       ceramics, wood works, plumbing, electrical installation, etc.)

b)-1 _____

b)-2 _____

b)-3 _____

Q53-3) Education (primary, secondary, higher education, vocational training, etc.)

c)-1 _____

c)-2 _____

c)-3 _____

Q53-4) Public Health (betterment of medical facilities & equipment, provision of basic
       medicines, medical & nursing care, maternal and child health care, prenatal,
       natal & postnatal care, immunisation, sanitary training, nutrition, environmental
       sanitation, safe water, preventing disease, etc.)

d)-1 _____

d)-2 _____

d)-3 _____

Q 54 If the situations permit, what kinds of crops do you want to cultivate in the future for diversification?

Q54-1) Crops and products for diversification

a) _____

b) _____

c) _____

d) _____

Q54-2) Rank in the order of importance

1	2	3	4	5

Q54-3) Respective reasons for selecting the top three crops

a) _____

b) _____

c) _____

d) _____

Q 55

Q55-1) Do you have any plan or expectation to engage in the new business?
a) Yes   b) No

Q55-2) Category of expected business

	a) Expected business	b) Outputs/ products
1.		
2.		
3.		

Q 56 Do you know anything about the Kok-Ing-Nan Water Diversion Project? If "Yes", what do you know? Please state all you know about this Project.
a) No   b) Yes (specify):

_____

Q 57 Do you think any environmental impacts will be brought about, if the Kok-Ing-Nan Water Diversion Project is implemented in your area and region?
a) Surely yes   b) Maybe yes   c) No

Q 58 If your answer is a) Surely yes or b) Maybe yes, please mention your expectation and/or apprehensions to both the positive and negative impacts.

1. Positive impacts

(1) _____

(2) _____

(3) _____

(4) _____

2. Negative impacts (natural & social)

(5) _____

(6) _____

(7) _____

(8) _____

3.3 Data from the Interview Survey

(1) Profile of Respondents

Table 3.3.1 Sex, Age and Marital Status of Respondents [Q.1,2,3]

	Nong Bua	Huai Pheung	Wiang Wai	Nong Sao	Mai Don Kaew	Pak Ing Tai	Total
	n = 25	n = 34	n = 49	n = 59	n = 53	n = 54	n = 274
Sex							
male	18	20	28	27	18	31	142
	(72.0 %)	(58.8 %)	(57.1 %)	(45.8 %)	(34.0 %)	(57.4 %)	(51.8 %)
female	7	14	21	32	35	23	132
	(28.0 %)	(41.2 %)	(42.9 %)	(54.2 %)	(66.0 %)	(42.6 %)	(48.2 %)
Age							
Range	27 - 75	24 - 75	18 - 77	15 - 72	15 - 74	20 - 78	15 - 78
Average	54	41	44	46	47	47	46
Under 15	0	0	0	1	2	0	3
	(0.0 %)	(0.0 %)	(0.0 %)	(1.7 %)	(3.8 %)	(0.0 %)	(1.1 %)
16 - 35	3	7	13	15	6	15	59
	(12.0 %)	(20.6 %)	(26.5 %)	(25.4 %)	(11.3 %)	(27.8 %)	(21.5 %)
36 - 60	11	24	28	29	37	27	156
	(44.0 %)	(70.6 %)	(57.1 %)	(49.2 %)	(69.8 %)	(50.0 %)	(56.9 %)
Over 60	11	2	8	14	8	12	55
	(44.0 %)	(5.9 %)	(16.3 %)	(23.7 %)	(15.1 %)	(22.2 %)	(20.1 %)
no answer	0	1	0	0	0	0	1
	(0.0 %)	(2.9 %)	(0.0 %)	(0.0 %)	(0.0 %)	(0.0 %)	(0.4 %)
Marital Status							
single	1	0	8	5	3	4	21
	(4.0 %)	(0.0 %)	(16.3 %)	(8.5 %)	(5.7 %)	(7.4 %)	(7.7 %)
married	21	31	36	48	46	44	226
	(84.0 %)	(91.2 %)	(73.5 %)	(81.4 %)	(86.8 %)	(81.5 %)	(82.5 %)
widow/widower	2	3	4	3	4	4	20
	(8.0 %)	(8.8 %)	(8.2 %)	(5.1 %)	(7.5 %)	(7.4 %)	(7.3 %)
separated	0	0	1	3	0	2	6
	(0.0 %)	(0.0 %)	(2.0 %)	(5.1 %)	(0.0 %)	(3.7 %)	(2.2 %)
no answer	1	0	0	0	0	0	1
	(4.0 %)	(0.0 %)	(0.0 %)	(0.0 %)	(0.0 %)	(0.0 %)	(0.4 %)

Table 3.3.2 Original Location and Daily Language of Respondents [Q.4,5,6,7]

	Nong Bua	Huai Pheung	Wiang Wai	Nong Sao	Mai Don Kaew	Pak Ing Tai	Total
	n = 25	n = 34	n = 49	n = 59	n = 53	n = 54	n = 274
Original Location							
northern region	1 (4.0 %)	26 (76.5 %)	42 (85.7 %)	2 (3.4 %)	52 (98.1 %)	40 (74.1 %)	163 (59.5 %)
north-eastern region	24 (96.0 %)	7 (20.6 %)	1 (2.0 %)	52 (88.1 %)	1 (1.9 %)	7 (13.0 %)	92 (33.6 %)
central region	0 (0.0 %)	0 (0.0 %)	0 (0.0 %)	0 (0.0 %)	0 (0.0 %)	1 (1.9 %)	1 (0.4 %)
southern region	0 (0.0 %)	1 (2.9 %)	0 (0.0 %)	0 (0.0 %)	0 (0.0 %)	0 (0.0 %)	1 (0.4 %)
no answer	0 (0.0 %)	0 (0.0 %)	6 (12.2 %)	5 (8.5 %)	0 (0.0 %)	6 (11.1 %)	17 (6.2 %)
Ethnic Groups							
local	1 (4.0 %)	17 (50.0 %)	9 (18.4 %)	2 (3.4 %)	52 (98.1 %)	11 (20.4 %)	92 (33.6 %)
I-san	16 (64.0 %)	6 (17.6 %)	4 (8.2 %)	49 (83.1 %)	0 (0.0 %)	7 (13.0 %)	82 (29.9 %)
Lao	0 (0.0 %)	0 (0.0 %)	0 (0.0 %)	0 (0.0 %)	0 (0.0 %)	7 (13.0 %)	7 (2.6 %)
no answer	8 (32.0 %)	11 (32.4 %)	36 (73.5 %)	8 (13.6 %)	1 (1.9 %)	29 (53.7 %)	93 (33.9 %)
Daily Language							
northern dialect	4 (16.0 %)	28 (82.4 %)	46 (93.9 %)	7* (11.9 %)	52 (98.1 %)	24 (44.4 %)	161 (58.8 %)
north-eastern dialect	21 (84.0 %)	4 (11.8 %)	3 (6.1 %)	55* (93.2 %)	1 (1.9 %)	23 (42.6 %)	107 (39.1 %)
central Thai	0 (0.0 %)	2 (5.9 %)	0 (0.0 %)	1 (1.7 %)	0 (0.0 %)	1 (1.9 %)	4 (1.5 %)
Lao	0 (0.0 %)	0 (0.0 %)	0 (0.0 %)	0 (0.0 %)	0 (0.0 %)	6 (11.1 %)	6 (2.2 %)

* Four respondents in Nong Sao stated that they use both northern and north-eastern dialects equally.

Table 3.3.3 Occupation and Education Level of Respondents [Q.8]

	Nong Bua	Huai Pheung	Wiang Wai	Nong Sao	Mai Don Kaew	Pak Ing Tai	Total
	n = 25	n = 34	n = 49	n = 59	n = 53	n = 54	n = 274
Occupation							
farmer	20	31	34	44	42	34	205
	(80.0 %)	(91.2 %)	(69.4 %)	(74.6 %)	(79.2 %)	(63.0 %)	(74.8 %)
public officer	0	0	0	1	0	2	3
	(0.0 %)	(0.0 %)	(0.0 %)	(1.7 %)	(0.0 %)	(3.7 %)	(1.1 %)
salary worker	1	0	3	0	0	0	4
	(4.0 %)	(0.0 %)	(6.1 %)	(0.0 %)	(0.0 %)	(0.0 %)	(1.5 %)
wage worker	0	0	0	2	1	4	7
	(0.0 %)	(0.0 %)	(0.0 %)	(3.4 %)	(1.9 %)	(7.4 %)	(2.6 %)
private business	1	3	3	4	7	5	23
	(4.0 %)	(8.8 %)	(6.1 %)	(6.8 %)	(13.2 %)	(9.3 %)	(8.4 %)
pension receiver	0	0	0	2	0	0	2
	(0.0 %)	(0.0 %)	(0.0 %)	(3.4 %)	(0.0 %)	(0.0 %)	(0.7 %)
student	0	0	4	3	2	2	11
	(0.0 %)	(0.0 %)	(8.2 %)	(5.1 %)	(3.8 %)	(3.7 %)	(4.0 %)
no job	3	0	5	3	1	7	19
	(12.0 %)	(0.0 %)	(10.2 %)	(5.1 %)	(1.9 %)	(13.0 %)	(6.9 %)
Education							
no formal education	0	2	4	1	14	11	32
	(0.0 %)	(5.9 %)	(8.2 %)	(1.7 %)	(26.4 %)	(20.4 %)	(11.7 %)
primary school	23	31	38	49	35	33	209
	(92.0 %)	(91.2 %)	(77.6 %)	(83.1 %)	(66.0 %)	(61.1 %)	(76.3 %)
Secondary (M3)	1	1	2	4	3	6	17
	(4.0 %)	(2.9 %)	(4.1 %)	(6.8 %)	(5.7 %)	(11.1 %)	(6.2 %)
Secondary (M6)	1	0	5	5	1	4	16
	(4.0 %)	(0.0 %)	(10.2 %)	(8.5 %)	(1.9 %)	(7.4 %)	(5.8 %)
Tertiary	0	0	0	0	0	0	0
	(0.0 %)	(0.0 %)	(0.0 %)	(0.0 %)	(0.0 %)	(0.0 %)	(0.0 %)

Table 3.3.4 Occupation and Education Level of Respondents (by sex) [Q.8]

	Nong Bua		Huai Pheung		Wiang Wai		Nong Sao		Mai Don Kaew		Pak Ing Tai		Total	
	M n=18	F n=7	M n=20	F n=14	M n=28	F n=21	M n=27	F n=32	M n=18	F n=35	M n=31	F n=23	M n=142	F n=132
Occupation														
farmer	15 83.3%	5 71.4%	19 95.0%	12 85.7%	17 60.7%	17 81.0%	20 74.1%	24 75.0%	14 77.8%	28 80.0%	19 61.3%	15 65.2%	104 73.2%	101 76.5%
public officer	0 0.0%	0 0.0%	0 0.0%	0 0.0%	0 0.0%	0 0.0%	1 3.7%	0 0.0%	0 0.0%	0 0.0%	2 6.5%	0 0.0%	3 2.1%	0 0.0%
salary worker	1 5.6%	0 0.0%	0 0.0%	0 0.0%	3 10.7%	0 0.0%	0 0.0%	0 0.0%	0 0.0%	0 0.0%	0 0.0%	0 0.0%	4 2.8%	0 0.0%
wage worker	0 0.0%	0 0.0%	0 0.0%	0 0.0%	0 0.0%	0 0.0%	0 0.0%	2 6.3%	1 5.6%	0 0.0%	1 3.2%	3 13.0%	2 1.4%	5 3.8%
private business	1 5.6%	0 0.0%	1 5.0%	2 14.3%	3 10.7%	0 0.0%	3 11.1%	1 3.1%	1 5.6%	6 17.1%	3 9.7%	2 8.7%	12 8.5%	11 8.3%
pension receiver	0 0.0%	0 0.0%	0 0.0%	0 0.0%	0 0.0%	0 0.0%	1 3.7%	1 3.1%	0 0.0%	0 0.0%	0 0.0%	0 0.0%	1 0.7%	1 0.8%
student	0 0.0%	0 0.0%	0 0.0%	0 0.0%	1 3.6%	3 14.3%	0 0.0%	3 9.4%	1 5.6%	1 2.9%	2 6.5%	0 0.0%	4 2.8%	7 5.3%
no job	1 5.6%	2 28.6%	0 0.0%	0 0.0%	4 14.3%	1 4.8%	2 7.4%	1 3.1%	1 5.6%	0 0.0%	4 12.9%	3 13.0%	12 8.5%	7 5.3%
Education														
no formal education	0 0.0%	0 0.0%	1 5.0%	1 7.1%	2 7.1%	2 9.5%	0 0.0%	1 3.1%	2 11.1%	12 34.3%	5 16.1%	6 26.1%	10 7.0%	22 16.7%
primary school	18 100%	5 71.4%	18 90.0%	13 92.9%	22 78.6%	16 76.2%	22 81.5%	27 84.4%	15 83.3%	20 57.1%	18 58.1%	15 65.2%	113 79.6%	96 72.7%
secondary M3	0 0.0%	1 14.3%	1 5.0%	0 0.0%	2 7.1%	0 0.0%	1 3.7%	3 9.4%	0 0.0%	3 8.6%	4 12.9%	2 8.7%	8 5.6%	9 6.8%
secondary M6	0 0.0%	1 14.3%	0 0.0%	0 0.0%	2 7.1%	3 14.3%	4 14.8%	1 3.1%	1 5.6%	0 0.0%	4 12.9%	0 0.0%	11 7.7%	5 3.8%
tertiary	0 0.0%	0 0.0%	0 0.0%	0 0.0%	0 0.0%	0 0.0%	0 0.0%	0 0.0%	0 0.0%	0 0.0%	0 0.0%	0 0.0%	0 0.0%	0 0.0%

Table 3.3.5 Religion of Respondent [Q.9]

<Religion>	Nong Bua	Huai Pheung	Wiang Wai	Nong Sao	Mai Don Kaew	Pak Ing Tai	Total
	n = 25	n = 34	n = 49	n = 59	n = 53	n = 54	n = 274
Buddhist	25 (100.0 %)	34 (100.0 %)	48 (98.0 %)	59 (100.0 %)	53 (100.0 %)	52 (96.3 %)	271 (98.9 %)
Christian	0 (0.0 %)	0 (0.0 %)	1 (2.0 %)	0 (0.0 %)	0 (0.0 %)	2 (3.7 %)	3 (1.1 %)

(2)   Living Conditions

Table 3.3.6 Characteristics of Respondents' Household Members [Q.4,8]

	Nong Bua	Huai Pheung	Wiang Wai	Nong Sao	Mai Don Kaew	Pak Ing Tai	Total
	n = 125	n = 134	n = 225	n =298	n = 190	n = 239	n = 1211
\<Household Size\>							
average	4.2	3.9	4.6	5.1	3.6	4.4	4.4
\<Sex\>							
male	53	71	122	149	96	117	608
	(42.4 %)	(53.0 %)	(54.2 %)	(50.0 %)	(50.5 %)	(49.0 %)	(50.2 %)
female	72	63	103	149	94	122	603
	(57.6 %)	(47.0 %)	(45.8 %)	(50.0 %)	(49.5 %)	(51.0 %)	(49.8 %)
\<Age\>							
under 15	31	33	48	83	33	57	285
	(24.8 %)	(24.6 %)	(21.3 %)	(27.9 %)	(17.4 %)	(23.8 %)	(23.5 %)
16 - 35	49	56	87	106	59	90	447
	(39.2 %)	(41.8 %)	(38.7 %)	(35.6 %)	(31.1 %)	(37.7 %)	(36.9 %)
36 -60	26	38	72	78	81	62	357
	(20.8 %)	(28.4 %)	(32.0 %)	(26.2 %)	(42.6 %)	(25.9 %)	(29.5 %)
over 60	19	7	18	31	17	30	122
	(15.2 %)	(5.2 %)	(8.0 %)	(10.4 %)	(8.9 %)	(12.6 %)	(10.1 %)
\<Relation to Respondent\>							
respondent	25	34	49	59	53	54	274
	(20.0 %)	(25.4 %)	(21.8 %)	(19.8 %)	(27.9 %)	(22.6 %)	(22.6 %)
kinship	100	100	176	239	117	178	910
	(80.0 %)	(74.6 %)	(78.2 %)	(80.2 %)	(61.6 %)	(74.5 %)	(75.1 %)
no answer	0	0	0	0	20	7	27
	(0.0 %)	(0.0 %)	(0.0 %)	(0.0 %)	(10.5 %)	(2.9 %)	(2.2 %)
\<Nuclear Families\>							
household	15	25	30	34	46	27	177
	(60.0 %)	(73.5 %)	(61.2 %)	(57.6 %)	(86.8 %)	(50.0 %)	(64.6 %)

Table 3.3.7 Occupation and Education Level of Household Members [Q.8]

	Nong Bua	Huai Pheung	Wiang Wai	Nong Sao	Mai Don Kaew	Pak Ing Tai	Total
	n = 125	n = 134	n = 225	n =298	n = 190	n = 239	n = 1211
Occupation							
Farmer	69	69	110	157	87	111	603
	(55.2 %)	(51.5 %)	(48.9 %)	(52.7 %)	(45.8 %)	(46.4 %)	(49.8 %)
public officer	3	0	2	1	1	4	11
	(2.4 %)	(0.0 %)	(0.9 %)	(0.3 %)	(0.5 %)	(1.7 %)	(0.9 %)
salary worker	6	9	13	7	7	7	49
	(4.8 %)	(6.7 %)	(5.8 %)	(2.3 %)	(3.7 %)	(2.9 %)	(4.0 %)
wage worker	0	6	11	6	10	18	51
	(0.0 %)	(4.5 %)	(4.9 %)	(2.0 %)	(5.3 %)	(7.5 %)	(4.2 %)
private business	5	0	11	10	23	17	66
	(4.0 %)	(0.0 %)	(4.9 %)	(3.4 %)	(12.1 %)	(7.1 %)	(5.5 %)
pension receiver	0	0	0	1	0	0	1
	(0.0 %)	(0.0 %)	(0.0 %)	(0.3 %)	(0.0 %)	(0.0 %)	(0.1 %)
student / children	27	40	· 60	92	47	55	321
	(21.6 %)	(29.9 %)	(26.7 %)	(30.9 %)	(24.7 %)	(23.0 %)	(26.5 %)
no job	15	10	18	24	15	27	109
	(12.0 %)	(7.5 %)	(8.0 %)	(8.1 %)	(7.9 %)	(11.3 %)	(9.0 %)
Education							
no formal education	8	9	30	33	29	50	159
	(6.4 %)	(6.7 %)	(13.3 %)	(11.1 %)	(15.3 %)	(20.9 %)	(13.1 %)
primary school	79	91	140	200	121	138	769
	(63.2 %)	(67.9 %)	(62.2 %)	(67.1 %)	(63.7 %)	(57.7 %)	(63.5 %)
secondary (M3)	18	14	26	37	20	24	139
	(14.4 %)	(10.4 %)	(11.6 %)	(12.4 %)	(10.5 %)	(10.0 %)	(11.5 %)
secondary (M6)	15	13	16	17	10	17	88
	(12.0 %)	(9.7 %)	(7.1 %)	(5.7 %)	(5.3 %)	(7.1 %)	(7.3 %)
tertiary	5	7	13	11	10	4	50
	(4.0 %)	(5.2 %)	(5.8 %)	(3.7 %)	(5.3 %)	(1.7 %)	(4.1 %)
under school age	0	0	0	0	0	6	6
	(0.0 %)	(0.0 %)	(0.0 %)	(0.0 %)	(0.0 %)	(2.5 %)	(0.5 %)

Table 3.3.8 Occupation and Education Level of Household Members (by sex) [Q.8]

	Nong Bua		Huai Pheung		Wiang Wai		Nong Sao		Mai Don Kaew		Pak Ing Tai		Total	
	M n=53	F n=72	M n=71	F n=63	M n=122	F n=103	M n=149	F n=149	M n=96	F n=94	M n=117	F n=122	M n=608	F n=603
Occupation														
farmer	36	33	35	34	62	48	78	79	51	36	54	57	316	287
	67.9%	45.8%	49.3%	54.0%	50.8%	46.6%	52.3%	53.0%	53.1%	38.3%	46.2%	46.7%	52.0%	47.6%
public officer	2	1	0	0	2	0	1	0	1	0	3	1	9	2
	3.8%	1.4%	0.0%	0.0%	1.6%	0.0%	0.7%	0.0%	1.0%	0.0%	2.6%	0.8%	1.5%	0.3%
salarly worker	4	2	5	4	8	5	4	3	4	3	3	4	28	21
	7.5%	2.8%	7.0%	6.3%	6.6%	4.9%	2.7%	2.0%	4.2%	3.2%	2.6%	3.3%	4.6%	3.5%
wage worker	0	0	3	3	4	7	3	3	5	5	9	9	24	27
	0.0%	0.0%	4.2%	4.8%	3.3%	6.8%	2.0%	2.0%	5.2%	5.3%	7.7%	7.4%	3.9%	4.5%
private business	1	4	0	0	5	6	3	7	7	16	9	8	25	41
	1.9%	5.6%	0.0%	0.0%	4.1%	5.8%	2.0%	4.7%	7.3%	17.0%	7.7%	6.6%	4.1%	6.8%
pension receiver	0	0	0	0	0	0	1	0	0	0	0	0	1	0
	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.2%	0.0%
student / children	5	22	24	16	30	30	47	45	24	23	30	25	160	161
	9.4%	30.6%	33.8%	25.4%	24.6%	29.1%	31.5%	30.2%	25.0%	24.5%	25.6%	20.5%	26.3%	26.7%
no job	5	10	4	6	11	7	12	12	4	11	9	18	45	64
	9.4%	13.9%	5.6%	9.5%	9.0%	6.8%	8.1%	8.1%	4.2%	11.7%	7.7%	14.8%	7.4%	10.6%
Education														
no formal education	2	6	5	4	14	16	16	17	12	17	19	31	68	91
	3.8%	8.3%	7.0%	6.3%	11.5%	15.5%	10.7%	11.4%	12.5%	18.1%	16.2%	25.4%	11.2%	15.1%
primary school	34	45	49	42	75	65	102	98	59	62	75	63	394	375
	64.2%	62.5%	69.0%	66.7%	61.5%	63.1%	68.5%	65.8%	61.5%	66.0%	64.1%	51.6%	64.8%	62.2%
secondary M3	7	11	5	9	16	10	17	20	12	8	9	15	66	73
	13.2%	15.3%	7.0%	14.3%	13.1%	9.7%	11.4%	13.4%	12.5%	8.5%	7.7%	12.3%	10.9%	12.1%
secondary M6	9	6	6	7	8	8	8	9	8	2	10	7	49	39
	17.0%	8.3%	8.5%	11.1%	6.6%	7.8%	5.4%	6.0%	8.3%	2.1%	8.5%	5.7%	8.1%	6.5%
tertiary	1	4	6	1	9	4	6	5	5	5	3	1	30	20
	1.9%	5.6%	8.5%	1.6%	7.4%	3.9%	4.0%	3.4%	5.2%	5.3%	2.6%	0.8%	4.9%	3.3%
under school age	0	0	0	0	0	0	0	0	0	0	1	5	1	5
	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.9%	4.1%	0.2%	0.8%

Table 3.3.9 Household Members' Living Time in House [Q.8]

	Nong Bua	Huai Pheung	Wiang Wai	Nong Sao	Mai Don Kaew	Pak Ing Tai	Total
	n = 125	n = 134	n = 225	n =298	n = 190	n = 239	n = 1211
throughout the year	117 (93.6 %)	117 (87.3 %)	196 (87.1 %)	278 (93.3 %)	157 (82.6 %)	214 (89.5 %)	1079 (89.1 %)
absent more than 3 moths	8 (6.4 %)	17 (12.7 %)	29 (12.9 %)	20 (6.7 %)	33 (17.4 %)	18 (7.5 %)	125 (10.3 %)
no answer	0 (0.0 %)	0 (0.0 %)	0 (0.0 %)	0 (0.0 %)	0 (0.0 %)	7 (2.9 %)	7 (0.6 %)

Table 3.3.10 Household Members' Living Time in House (by sex) [Q.8]

	Nong Bua		Huai Pheung		Wiang Wai		Nong Sao		Mai Don Kaew		Pak Ing Tai		Total	
	M	F	M	F	M	F	M	F	M	F	M	F	M	F
	n= 53	n=72	n=71	n=63	n=122	n=103	n=149	n=149	n=96	n=94	n=117	n=122	n=608	n=603
throughout the year	47	70	60	57	105	91	136	142	78	79	105	109	531	548
	88.7 %	97.2 %	84.5 %	90.5 %	86.1 %	88.3 %	91.3 %	95.3 %	81.3 %	84.0 %	89.7 %	89.3 %	87.3 %	90.9 %
absent more than 3 moths	6	2	11	6	17	12	13	7	18	15	9	9	74	51
	11.3 %	2.8 %	15.5 %	9.5 %	13.9 %	11.7 %	8.7 %	4.7 %	18.8 %	16.0 %	7.7 %	7.4 %	12.2 %	8.5 %
no answer	0	0	0	0	0	0	0	0	0	0	3	4	3	4
	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	2.6 %	3.3 %	0.5 %	0.7 %

Table 3.3.11. Annual Income per Household [Q.10].

Income Range (Baht)	Nong Bua	Huai Pheung	Wiang Wai	Nong Sao	Mai Don Kaew	Pak Ing Tai	Total
	n = 25	n = 34	n = 49	n = 59	n = 53	n = 54	n = 274
below 5,000	0 (0.0 %)	0 (0.0 %)	2 (4.1 %)	2 (3.4 %)	10 (18.9 %)	4 (7.4 %)	18 (6.6 %)
5,000 - 10,000	2 (8.0 %)	1 (2.9 %)	2 (4.1 %)	4 (6.8 %)	7 (13.2 %)	3 (5.6 %)	19 (6.9 %)
10,001 - 15,000	2 (8.0 %)	2 (5.9 %)	7 (14.3 %)	9 (15.3 %)	7 (13.2 %)	7 (13.0 %)	34 (12.4 %)
15,001 - 20,000	2 (8.0 %)	2 (5.9 %)	2 (4.1 %)	8 (13.6 %)	5 (9.4 %)	10 (18.5 %)	29 (10.6 %)
20,001 - 25,000	1 (4.0 %)	4 (11.8 %)	6 (12.2 %)	6 (10.2 %)	2 (3.8 %)	4 (7.4 %)	23 (8.4 %)
25,001 - 30,000	1 (4.0 %)	2 (5.9 %)	10 (20.4 %)	5 (8.5 %)	5 (9.4 %)	5 (9.3 %)	28 (10.2 %)
above 30,000	17 (68.0 %)	15 (44.1 %)	20 (40.8 %)	25 (42.4 %)	17 (32.1 %)	21 (38.9 %)	115 (42.0 %)
no answer	0 (0.0 %)	8 (23.5 %)	0 (0.0 %)	0 (0.0 %)	0 (0.0 %)	0 (0.0 %)	8 (2.9 %)
Average (Baht)	28,287	27,580	27,762	25,288	21,301	25,527	25,411

Table 3.3.12. Main Source of Income [Q.10]

Main Source of Income	Nong Bua	Huai Pheung	Wiang Wai	Nong Sao	Mai Don Kaew	Pak Ing Tai	Total
	n = 25	n = 34	n = 49	n = 59	n = 53	n = 54	n = 274
farming	17	20	30	35	25	35	162
	(68.0 %)	(58.8 %)	(61.2 %)	(59.3 %)	(47.2 %)	(64.8 %)	(59.1 %)
selling rice	(12)	(12)	(22)	(26)	(22)	(1)	(95)
	(48.0 %)	(35.3 %)	(44.9 %)	(44.1 %)	(41.5 %)	(1.9 %)	(34.7 %)
selling maize	(3)	(4)	(8)	(8)	(0)	(23)	(46)
	(12.0 %)	(11.8 %)	(16.3 %)	(13.6 %)	(0.0 %)	(42.6 %)	(16.8 %)
selling fruit	(2)	(0)	(0)	(0)	(2)	(3)	(7)
	(8.0 %)	(0.0 %)	(0.0 %)	(0.0 %)	(3.8 %)	(5.6 %)	(2.6 %)
selling vegetables	(0)	(4)	(0)	(1)	(1)	(8)	(14)
	(0.0 %)	(11.8 %)	(0.0 %)	(1.7 %)	(1.9 %)	(14.8 %)	(5.1 %)
livestock	0	2	2	0	1	1	6
	(0.0 %)	(5.9 %)	(4.1 %)	(0.0 %)	(1.9 %)	(1.9 %)	(2.2 %)
salary from permanent job	2	6	3	3	0	4	18
	(8.0 %)	(17.6 %)	(6.1 %)	(5.1 %)	(0.0 %)	(7.4 %)	(6.6 %)
wage from temporary job	2	0	4	5	11	6	28
	(8.0 %)	(0.0 %)	(8.2 %)	(8.5 %)	(20.8 %)	(11.1 %)	(10.2 %)
private business	0	3	2	4	13	5	27
	(0.0 %)	(8.8 %)	(4.1 %)	(6.8 %)	(24.5 %)	(9.3 %)	(9.9 %)
remittances from family member	1	3	3	9	3	2	21
	(4.0 %)	(8.8 %)	(6.1 %)	(15.3 %)	(5.7 %)	(3.7 %)	(7.7 %)
others	1	0	1	1	0	1	4
	(4.0 %)	(0.0 %)	(2.0 %)	(1.7 %)	(0.0 %)	(1.9 %)	(1.5 %)
no answer	2	0	4	2	0	0	8
	(8.0 %)	(0.0 %)	(8.2 %)	(3.4 %)	(0.0 %)	(0.0 %)	(2.9 %)

Table 3.3.13. Expenditures [Q.11]

Expenditure Range (Baht)	Nong Bua	Huai Pheung	Wiang Wai	Nong Sao	Mai Don Kaew	Pak Ing Tai	Total
	n = 25	n = 34	n = 49	n = 59	n = 53	n = 54	n = 274
below 5,000	0	0	0	6	1	4	11
	(0.0 %)	(0.0 %)	(0.0 %)	(10.2 %)	(1.9 %)	(7.4 %)	(4.0 %)
5,000 - 10,000	3	2	5	5	3	2	20
	(12.0 %)	(5.9 %)	(10.2 %)	(8.5 %)	(5.7 %)	(3.7 %)	(7.3 %)
10,001 - 15,000	6	2	5	8	6	2	29
	(24.0 %)	(5.9 %)	(10.2 %)	(13.6 %)	(11.3 %)	(3.7 %)	(10.6 %)
15,001 - 20,000	3	6	7	9	14	7	46
	(12.0 %)	(17.6 %)	(14.3 %)	(15.3 %)	(26.4 %)	(13.0 %)	(16.8 %)
20,001 - 25,000	1	5	6	5	3	6	26
	(4.0 %)	(14.7 %)	(12.2 %)	(8.5 %)	(5.7 %)	(11.1 %)	(9.5 %)
25,001 - 30,000	0	2	4	4	6	6	22
	(0.0 %)	(5.9 %)	(8.2 %)	(6.8 %)	(11.3 %)	(11.1 %)	(8.0 %)
above 30,000	12	17	22	20	14	27	112
	(48.0 %)	(50.0 %)	(44.9 %)	(33.9 %)	(26.4 %)	(50.0 %)	(40.9 %)
no answer	0	0	0	2	6	0	8
	(0.0 %)	(0.0 %)	(0.0 %)	(3.4 %)	(11.3 %)	(0.0 %)	(2.9 %)
Average (Baht)	24,180	26,150	24,510	22,531	22,576	24,930	24,008

Table 3.3.14. Total Debt per Household [Q.12].

Debt Range (Baht)	Nong Bua	Huai Pheung	Wiang Wai	Nong Sao	Mai Don Kaew	Pak Ing Tai	Total
	n = 25	n = 34	n = 49	n = 59	n = 53	n = 54	n = 274
no debt	0	0	0	0	3	9	12
	(0.0 %)	(0.0 %)	(0.0 %)	(0.0 %)	(5.7 %)	(16.7 %)	(4.4 %)
below 5,000	1	1	4	14	9	6	35
	(4.0 %)	(2.9 %)	(8.2 %)	(23.7 %)	(17.0 %)	(11.1 %)	(12.8 %)
5,000 - 10,000	3	3	2	2	5	0	15
	(12.0 %)	(8.8 %)	(4.1 %)	(3.4 %)	(9.4 %)	(0.0 %)	(5.5 %)
10,001 - 15,000	3	1	3	3	2	2	14
	(12.0 %)	(2.9 %)	(6.1 %)	(5.1 %)	(3.8 %)	(3.7 %)	(5.1 %)
15,001 - 20,000	1	1	2	6	5	1	16
	(4.0 %)	(2.9 %)	(4.1 %)	(10.2 %)	(9.4 %)	(1.9 %)	(5.8 %)
20,001 - 25,000	0	1	1	2	0	0	4
	(0.0 %)	(2.9 %)	(2.0 %)	(3.4 %)	(0.0 %)	(0.0 %)	(1.5 %)
25,001 - 30,000	3	4	6	7	4	6	30
	(12.0 %)	(11.8 %)	(12.2 %)	(11.9 %)	(7.5 %)	(11.1 %)	(10.9 %)
above 30,000	13	19	14	22	21	7	96
	(52.0 %)	(55.9 %)	(28.6 %)	(37.3 %)	(39.6 %)	(13.0 %)	(35.0 %)
no answer	1	4	17	3	4	23	52
	(4.0 %)	(11.8 %)	(34.7 %)	(5.1 %)	(7.5 %)	(42.6 %)	(19.0 %)
Average (Baht)	68,045	60,186	66,531	25,659	43,316	64,487	50,118

Table 3.3.15. Total Savings per Household [Q.13].

Savings Range (Baht)	Nong Bua	Huai Pheung	Wiang Wai	Nong Sao	Mai Don Kaew	Pak Ing Tai	Total
	n = 25	n = 34	n = 49	n = 59	n = 53	n = 54	n = 274
no savings	17	0	0	0	12	30	59
	(68.0 %)	(0.0 %)	(0.0 %)	(0.0 %)	(22.6 %)	(55.6 %)	(21.5 %)
below 5,000	2	4	0	46	27	1	80
	(8.0 %)	(11.8 %)	(0.0 %)	(78.0 %)	(50.9 %)	(1.9 %)	(29.2 %)
5,000 - 10,000	2	1	2	4	2	3	14
	(8.0 %)	(2.9 %)	(4.1 %)	(6.8 %)	(3.8 %)	(5.6 %)	(5.1 %)
10,001 - 15,000	0	0	0	0	0	1	1
	(0.0 %)	(0.0 %)	(0.0 %)	(0.0 %)	(0.0 %)	(1.9 %)	(0.4 %)
15,001 - 20,000	0	0	0	1	1	0	2
	(0.0 %)	(0.0 %)	(0.0 %)	(1.7 %)	(1.9 %)	(0.0 %)	(0.7 %)
20,001 - 25,000	1	0	1	0	0	1	3
	(4.0 %)	(0.0 %)	(2.0 %)	(0.0 %)	(0.0 %)	(1.9 %)	(1.1 %)
25,001 - 30,000	0	1	0	1	1	0	3
	(0.0 %)	(2.9 %)	(0.0 %)	(1.7 %)	(1.9 %)	(0.0 %)	(1.1 %)
above 30,000	3	0	3	4	2	3	15
	(12.0 %)	(0.0 %)	(6.1 %)	(6.8 %)	(3.8 %)	(5.6 %)	(5.5 %)
no answer	0	28	43	3	8	15	97
	(0.0 %)	(82.4 %)	(87.8 %)	(5.1 %)	(15.1 %)	(27.8 %)	(35.4 %)
Average (Baht)	55,500	42,667	43,500	39,778	25,265	10,625	32,109

Table 3.3.16. Average Income, Expenditures, Debt and Savings (Baht) [Q.10,11,12,13].

	Nong Bua	Huai Pheung	Wiang Wai	Nong Sao	Mai Don Kaew	Pak Ing Tai	Total
Annual Income	28,278	27,580	27,262	25,288	21,301	25,527	25,411
	n = 25	n = 26	n = 49	n = 59	n = 53	n = 54	n = 266
Annual Expenditures	24,180	26,150	24,510	22,531	22,576	24,930	24,008
	n = 25	n = 34	n = 49	n = 57	n = 47	n = 54	n = 266
Total Debt	68,045	60,186	66,531	25,659	43,316	64,487	50,118
	n = 24	n = 30	n = 32	n = 56	n = 49	n = 31	n = 222
Total Savings	55,500	42,667	43,500	39,778	25,265	10,625	32,109
	n = 25	n = 6	n = 6	n = 56	n = 45	n = 39	n = 177

Table 3.3.17 Drinking Water [Q.14]

	Nong Bua	Huai Pheung	Wiang Wai	Nong Sao	Mai Don Kaew	Pak Ing Tai	Total
	n = 25	n = 34	n = 49	n = 59	n = 53	n = 54	n = 274
Source of Drinking Water (multiple answer possible)							
shallow well	3	5	4	30	9	0	51
	(12.0 %)	(14.7 %)	(8.2 %)	(50.8 %)	(17.0 %)	(0.0 %)	(18.6 %)
deep well	2	1	1	3	26	0	33
	(8.0 %)	(2.9 %)	(2.0 %)	(5.1 %)	(49.1 %)	(0.0 %)	(12.0 %)
river	0	0	0	0	0	3	3
	(0.0 %)	(0.0 %)	(0.0 %)	(0.0 %)	(0.0 %)	(5.6 %)	(1.1 %)
rain	17	28	1	34	10	29	119
	(68.0 %)	(82.4 %)	(2.0 %)	(57.6 %)	(18.9 %)	(53.7 %)	(43.4 %)
water supply system	18	4	48	11	17	30	128
	(72.0 %)	(11.8 %)	(98.0 %)	(18.6 %)	(32.1 %)	(55.6 %)	(46.7 %)
bottled water	0	4	0	5	0	6	15
	(0.0 %)	(11.8 %)	(0.0 %)	(8.5 %)	(0.0 %)	(11.1 %)	(5.5 %)
Problem of Drinking Water							
exist	8	13	5	32	4	30	92
	(32.0 %)	(38.2 %)	(10.2 %)	(54.2 %)	(7.5 %)	(55.6 %)	(33.6 %)
not exist	14	15	7	23	49	15	123
	(56.0 %)	(44.1 %)	(14.3 %)	(39.0 %)	(92.5 %)	(27.8 %)	(44.9 %)
no answer	3	6	37	4	0	9	59
	(12.0 %)	(17.6 %)	(75.5 %)	(6.8 %)	(0.0 %)	(16.7 %)	(21.5 %)

Table 3.3.18 Cooking Fuel and Lighting [Q.15,16]

	Nong Bua	Huai Pheung	Wiang Wai	Nong Sao	Mai Don Kaew	Pak Ing Tai	Total
	n = 25	n = 34	n = 49	n = 59	n = 53	n = 54	n = 274
Source of Fuel for Cooking (multiple answer possible)							
wood	18 (72.0 %)	31 (91.2 %)	37 (75.5 %)	51 (86.4 %)	34 (64.2 %)	43 (79.6 %)	214 (78.1 %)
charcoal	5 (20.0 %)	11 (32.4 %)	13 (26.5 %)	13 (22.0 %)	20 (37.7 %)	13 (24.1 %)	75 (27.4 %)
gas	14 (56.0 %)	23 (67.6 %)	30 (61.2 %)	31 (52.5 %)	33 (62.3 %)	29 (53.7 %)	160 (58.4 %)
others (corn husk.)	0 (0.0 %)	0 (0.0 %)	3 (6.1 %)	1 (1.7 %)	0 (0.0 %)	2 (3.7 %)	6 (2.2 %)
Problem of Cooking Fuel							
no wood in rainy season	1 (4.0 %)	6 (17.6 %)	0 (0.0 %)	8 (13.6 %)	0 (0.0 %)	1 (1.9 %)	16 (5.8 %)
gas is expensive	4 (16.0 %)	16 (47.1 %)	8 (16.3 %)	15 (25.4 %)	9 (17.0 %)	5 (9.3 %)	57 (20.8 %)
no problem	11 (44.0 %)	6 (17.6 %)	4 (8.2 %)	12 (20.3 %)	41 (77.4 %)	19 (35.2 %)	93 (33.9 %)
no answer	9 (36.0 %)	6 (17.6 %)	37 (75.5 %)	24 (40.7 %)	3 (5.7 %)	29 (53.7 %)	108 (39.4 %)
Source of Lighting							
electricity	25 (100.0 %)	34 (100.0 %)	49 (100.0 %)	59 (100.0 %)	53 (100.0 %)	54 (100.0 %)	274 (100.0 %)

Table 3.3.19 Household Possessions [Q.17-1]

	Nong Bua	Huai Pheung	Wiang Wai	Nong Sao	Mai Don Kaew	Pak Ing Tai	Total
	n = 25	n = 34	n = 49	n = 59	n = 53	n = 54	n = 274
House							
house	25	34	49	59	53	51	271
	(100.0 %)	(100.0 %)	(100.0 %)	(100.0 %)	(100.0 %)	(94.4 %)	(98.9 %)
toilet	24	34	49	59	53	50	269
	(96.0 %)	(100.0 %)	(100.0 %)	(100.0 %)	(100.0 %)	(92.6 %)	(98.2 %)
Household Appliances							
radio	13	16	21	22	26	14	112
	(52.0 %)	(47.1 %)	(42.9 %)	(37.3 %)	(49.1 %)	(25.9 %)	(40.9 %)
TV	25	34	46	55	51	51	262
	(100.0 %)	(100.0 %)	(93.9 %)	(93.2 %)	(96.2 %)	(94.4 %)	(95.6 %)
tape recorder	20	26	33	37	45	38	199
	(80.0 %)	(76.5 %)	(67.3 %)	(62.7 %)	(84.9 %)	(70.4 %)	(72.6 %)
refrigerator	18	29	38	32	47	42	206
	(72.0 %)	(85.3 %)	(77.6 %)	(54.2 %)	(88.7 %)	(77.8 %)	(75.2 %)
electric fan	24	33	45	55	52	48	257
	(96.0 %)	(97.1 %)	(91.8 %)	(93.2 %)	(98.1 %)	(88.9 %)	(93.8 %)
electric iron	21	20	36	42	38	37	194
	(84.0 %)	(58.8 %)	(73.5 %)	(71.2 %)	(71.7 %)	(68.5 %)	(70.8 %)
sewing machine	3	4	10	9	16	13	55
	(12.0 %)	(11.8 %)	(20.4 %)	(15.3 %)	(30.2 %)	(24.1 %)	(20.1 %)
washing machine	2	3	5	4	17	15	46
	(8.0 %)	(8.8 %)	(10.2 %)	(6.8 %)	(32.1 %)	(27.8 %)	(16.8 %)
Vehicle							
car	6	10	3	7	11	9	46
	(24.0 %)	(29.4 %)	(6.1 %)	(11.9 %)	(20.8 %)	(16.7 %)	(16.8 %)
truck	0	0	1	0	0	2	3
	(0.0 %)	(0.0 %)	(2.0 %)	(0.0 %)	(0.0 %)	(3.7 %)	(1.1 %)
motorcycle	19	22	36	42	39	26	184
	(76.0 %)	(64.7 %)	(73.5 %)	(71.2 %)	(73.6 %)	(48.1 %)	(67.2 %)
bicycle	16	17	27	33	41	28	162
	(64.0 %)	(50.0 %)	(55.1 %)	(55.9 %)	(77.4 %)	(51.9 %)	(59.1 %)

Table 3.3.20 Desired Items to Purchase [Q.17-2]

	Nong Bua	Huai Pheung	Wiang Wai	Nong Sao	Mai Don Kaew	Pak Ing Tai	Total
	n = 25	n = 34	n = 49	n = 59	n = 53	n = 54	n = 274
pick-up car	9	6	7	7	7	3	39
	(36.0 %)	(17.6 %)	(14.3 %)	(11.9 %)	(13.2 %)	(5.6 %)	(14.2 %)
motorcycle	0	2	2	0	2	1	7
	(0.0 %)	(5.9 %)	(4.1 %)	(0.0 %)	(3.8 %)	(1.9 %)	(2.6 %)
water pump	1	4	0	2	2	3	12
	(4.0 %)	(11.8 %)	(0.0 %)	(3.4 %)	(3.8 %)	(5.6 %)	(4.4 %)
rice mill	1	2	0	3	0	1	7
	(4.0 %)	(5.9 %)	(0.0 %)	(5.1 %)	(0.0 %)	(1.9 %)	(2.6 %)
washing machine	3	1	5	2	2	7	20
	(12.0 %)	(2.9 %)	(10.2 %)	(3.4 %)	(3.8 %)	(13.0 %)	(7.3 %)
new house	1	2	2	3	0	4	12
	(4.0 %)	(5.9 %)	(4.1 %)	(5.1 %)	(0.0 %)	(7.4 %)	(4.4 %)
telephone	1	0	2	1	0	1	5
	(4.0 %)	(0.0 %)	(4.1 %)	(1.7 %)	(0.0 %)	(1.9 %)	(1.8 %)
farm land	0	2	0	1	3	1	7
	(0.0 %)	(5.9 %)	(0.0 %)	(1.7 %)	(5.7 %)	(1.9 %)	(2.6 %)
grass cutter	0	2	0	0	0	3	5
	(0.0 %)	(5.9 %)	(0.0 %)	(0.0 %)	(0.0 %)	(5.6 %)	(1.8 %)
tiller	0	0	0	6	0	1	7
	(0.0 %)	(0.0 %)	(0.0 %)	(10.2 %)	(0.0 %)	(1.9 %)	(2.6 %)
E-tan	0	1	2	0	1	0	4
	(0.0 %)	(2.9 %)	(4.1 %)	(0.0 %)	(1.9 %)	(0.0 %)	(1.5 %)
others	2	1	7	4	1	11	26
	(8.0 %)	(2.9 %)	(14.3 %)	(6.8 %)	(1.9 %)	(20.4 %)	(9.5 %)
Nothing	6	2	7	16	19	17	67
	(24.0 %)	(5.9 %)	(14.3 %)	(27.1 %)	(35.8 %)	(31.5 %)	(24.5 %)
No answer	3	7	13	4	0	5	32
	(12.0 %)	(20.6 %)	(26.5 %)	(6.8 %)	(0.0 %)	(9.3 %)	(11.7 %)

Table 3.3.21 Member of Community Organisations [Q.18-1]

	Nong Bua	Huai Pheung	Wiang Wai	Nong Sao	Mai Don Kaew	Pak Ing Tai	Total
	n = 25	n = 34	n = 49	n = 59	n = 53	n = 54	n = 274
Member of a Community Organisation							
member*	21	30	26	9	34	41	161
	(84.0 %)	(88.2 %)	(53.1 %)	(15.3 %)	(64.2 %)	(75.9 %)	(58.8 %)
no member	1	3	16	2	19	12	53
	(4.0 %)	(8.8 %)	(32.7 %)	(3.4 %)	(35.8 %)	(22.2 %)	(19.3 %)
no answer	3	1	7	48	0	1	60
	(12.0 %)	(2.9 %)	(14.3 %)	(81.4 %)	(0.0 %)	(1.9 %)	(21.9 %)
Types of Organisations**							
farmers' organisations	6	5	28	2	31	15	87
	(24.0 %)	(14.7 %)	(57.1 %)	(3.4 %)	(58.5 %)	(27.8 %)	(31.8 %)
social organisation	11	20	5	4	39	17	96
	(44.0 %)	(58.8 %)	(10.2 %)	(6.8 %)	(73.6 %)	(31.5 %)	(35.0 %)
religious organisation	4	21	27	0	2	3	57
	(16.0 %)	(61.8 %)	(55.1 %)	(0.0 %)	(3.8 %)	(5.6 %)	(20.8 %)
others	0	1	2	2	1	21	27
	(0.0 %)	(2.9 %)	(4.1 %)	(3.4 %)	(1.9 %)	(38.9 %)	(9.9 %)

* A member of at least one organisation
** Some respondents belong to more than one organisation

Table 3.3.22 Types of Organisations [Q.18-1].

	Nong Bua	Huai Pheung	Wiang Wai	Nong Sao	Mai Don Kaew	Pak Ing Tai	Total
	n = 25	n = 34	n = 49	n = 59	n = 53	n = 54	n = 274
Farmers' Organisation							
farmers' group	5	0	0	0	0	15	20
(non specific)	(20.0 %)	(0.0 %)	(0.0 %)	(0.0 %)	(0.0 %)	(27.8 %)	(7.3 %)
BAAC	1	5	10	0	29	0	45
	(4.0 %)	(14.7 %)	(20.4 %)	(0.0 %)	(54.7 %)	(0.0 %)	(16.4 %)
rice bank	0	0	0	1	2	0	3
	(0.0 %)	(0.0 %)	(0.0 %)	(1.7 %)	(3.8 %)	(0.0 %)	(1.1 %)
saving bank / group	0	0	17	0	0	0	17
	(0.0 %)	(0.0 %)	(34.7 %)	(0.0 %)	(0.0 %)	(0.0 %)	(6.2 %)
cooperative group	0	0	1	0	0	0	1
	(0.0 %)	(0.0 %)	(2.0 %)	(0.0 %)	(0.0 %)	(0.0 %)	(0.4 %)
cattle group	0	0	0	1	0	0	1
	(0.0 %)	(0.0 %)	(0.0 %)	(1.7 %)	(0.0 %)	(0.0 %)	(0.4 %)
Social Organisations							
social group	9	0	0	0	0	17	26
(non specific)	(36.0 %)	(0.0 %)	(0.0 %)	(0.0 %)	(0.0 %)	(31.5 %)	(9.5 %)
village group	0	9	0	1	6	0	16
	(0.0 %)	(26.5 %)	(0.0 %)	(1.7 %)	(11.3 %)	(0.0 %)	(5.8 %)
men's group	1	11	0	1	0	0	13
	(4.0 %)	(32.4 %)	(0.0 %)	(1.7 %)	(0.0 %)	(0.0 %)	(4.7 %)
housewife group	1	0	2	1	26	0	30
	(4.0 %)	(0.0 %)	(4.1 %)	(1.7 %)	(49.1 %)	(0.0 %)	(10.9 %)
youth group	0	0	3	1	0	0	4
	(0.0 %)	(0.0 %)	(6.1 %)	(1.7 %)	(0.0 %)	(0.0 %)	(1.5 %)
old people's group	0	0	0	0	7	0	7
	(0.0 %)	(0.0 %)	(0.0 %)	(0.0 %)	(13.2 %)	(0.0 %)	(2.6 %)

Table 3.3.23 Types of Organisations [Q.18-1] (continued)

	Nong Bua	Huai Pheung	Wiang Wai	Nong Sao	Mai Don Kaew	Pak Ing Tai	Total
	n = 25	n = 34	n = 49	n = 59	n = 53	n = 54	n = 274
Religious Organisations							
religious group	0	0	0	0	0	3	3
(non specific)	(0.0 %)	(0.0 %)	(0.0 %)	(0.0 %)	(0.0 %)	(5.6 %)	(1.1 %)
funeral group	4	21	27	0	1	0	53
	(16.0 %)	(61.8 %)	(55.1 %)	(0.0 %)	(1.9 %)	(0.0 %)	(19.3 %)
Christian group	0	0	0	0	1	0	1
	(0.0 %)	(0.0 %)	(0.0 %)	(0.0 %)	(1.9 %)	(0.0 %)	(0.4 %)
Other Organisations							
others	0	0	0	0	1	21	22
(non specific)	(0.0 %)	(0.0 %)	(0.0 %)	(0.0 %)	(1.9 %)	(38.9 %)	(8.0 %)
volunteer for public health	0	0	2	0	0	0	2
	(0.0 %)	(0.0 %)	(4.1 %)	(0.0 %)	(0.0 %)	(0.0 %)	(0.7 %)
weaving group	0	0	0	1	0	0	1
	(0.0 %)	(0.0 %)	(0.0 %)	(1.7 %)	(0.0 %)	(0.0 %)	(0.4 %)
teachers' co-operative	0	0	0	1	0	0	1
	(0.0 %)	(0.0 %)	(0.0 %)	(1.7 %)	(0.0 %)	(0.0 %)	(0.4 %)
criminal prevention	0	1	0	0	0	0	1
	(0.0 %)	(2.9 %)	(0.0 %)	(0.0 %)	(0.0 %)	(0.0 %)	(0.4 %)

Table 3.3.24 Groups influential in the community [Q.18-2]

Influential Groups	Nong Bua	Huai Pheung	Wiang Wai	Nong Sao	Mai Don Kaew	Pak Ing Tai	Total
	n = 25	n = 34	n = 49	n = 59	n = 53	n = 54	n = 274
housewife group	4	14	2	1	21	29	71
	(16.0 %)	(41.2 %)	(4.1 %)	(1.7 %)	(39.6 %)	(53.7 %)	(25.9 %)
funeral group	4	22	0	1	10	11	48
	(16.0 %)	(64.7 %)	(0.0 %)	(1.7 %)	(18.9 %)	(20.4 %)	(17.5 %)
village committee	1	6	0	1	0	7	15
	(4.0 %)	(17.6 %)	(0.0 %)	(1.7 %)	(0.0 %)	(13.0 %)	(5.5 %)
village group	0	0	0	0	4	0	4
	(0.0 %)	(0.0 %)	(0.0 %)	(0.0 %)	(7.5 %)	(0.0 %)	(1.5 %)
youth group	1	0	0	1	0	1	3
	(4.0 %)	(0.0 %)	(0.0 %)	(1.7 %)	(0.0 %)	(1.9 %)	(1.1 %)
men's group	0	0	1	0	0	0	1
	(0.0 %)	(0.0 %)	(2.0 %)	(0.0 %)	(0.0 %)	(0.0 %).	(0.4 %)
old people's group	0	0	0	0	3	0	3
	(0.0 %)	(0.0 %)	(0.0 %)	(0.0 %)	(5.7 %)	(0.0 %)	(1.1 %)
BAAC	0	0	2	0	19	1	22
	(0.0 %)	(0.0 %)	(4.1 %)	(0.0 %)	(35.8 %)	(1.9 %)	(8.0 %)
saving bank / group	0	1	0	0	1	0	2
	(0.0 %)	(2.9 %)	(0.0 %)	(0.0 %)	(1.9 %)	(0.0 %)	(0.7 %)
weaving group	0	0	2	0	0	0	2
	(0.0 %)	(0.0 %)	(4.1 %)	(0.0 %)	(0.0 %)	(0.0 %)	(0.7 %)
all of the above	2	0	0	0	0	0	2
	(8.0 %)	(0.0 %)	(0.0 %)	(0.0 %)	(0.0 %)	(0.0 %)	(0.7 %)
None is influential	0	0	33	53	1	2	89
	(0.0 %)	(0.0 %)	(67.3 %)	(89.8 %)	(1.9 %)	(3.7 %)	(32.5 %)
No answer	13	0	9	2	0	9	33
	(52.0 %)	(0.0 %)	(18.4 %)	(3.4 %)	(0.0 %)	(16.7 %)	(12.0 %)

Table 3.3.25 Custom of Reciprocal Help [Q.19]

Occasion of Reciprocal Help	Nong Bua	Huai Pheung	Wiang Wai	Nong Sao	Mai Don Kaew	Pak Ing Tai	Total
	n = 25	n = 34	n = 49	n = 59	n = 53	n = 54	n = 274
funeral group	3	0	0	7	0	0	10
	(12.0 %)	(0.0 %)	(0.0 %)	(11.9 %)	(0.0 %)	(0.0 %)	(3.6 %)
house building	1	0	11	6	11	3	32
	(4.0 %)	(0.0 %)	(22.4 %)	(10.2 %)	(20.8 %)	(5.6 %)	(11.7 %)
wedding	2	0	0	3	0	0	5
	(8.0 %)	(0.0 %)	(0.0 %)	(5.1 %)	(0.0 %)	(0.0 %)	(1.8 %)
temple fair	2	5	10	14	1	13	45
	(8.0 %)	(14.7 %)	(20.4 %)	(23.7 %)	(1.9 %)	(24.1 %)	(16.4 %)
rice harvesting	4	25	39	19	44	40	171
	(16.0 %)	(73.5 %)	(79.6 %)	(32.2 %)	(83.0 %)	(74.1 %)	(62.4 %)
No Custom	1	4	4	26	14	6	55
	(4.0 %)	(11.8 %)	(8.2 %)	(44.1 %)	(26.4 %)	(11.1 %)	(20.1 %)
No answer	12	0	0	0	0	0	12
	(48.0 %)	(0.0 %)	(0.0 %)	(0.0 %)	(0.0 %)	(0.0 %)	(4.4 %)

Table 3.3.26 Communal Care for Disadvantaged [Q.20]

	Nong Bua	Huai Pheung	Wiang Wai	Nong Sao	Mai Don Kaew	Pak Ing Tai	Total
	n = 25	n = 34	n = 49	n = 59	n = 53	n = 54	n = 274
Exist	25 (100.0 %)	29 (85.3 %)	39 (79.6 %)	47 (79.7 %)	49 (92.5 %)	38 (70.4 %)	227 (82.8 %)
care for HIV patients	yes	yes	yes			yes	
day care centre for children	yes		yes	yes		yes	
care for the old	yes	yes	yes		yes	yes	
care for the disabled					yes	yes	
donation to the poor					yes	yes	
state welfare card for the disadvantaged		yes	yes	yes			
No System	0 (0.0 %)	3 (8.8 %)	4 (8.2 %)	11 (18.6 %)	4 (7.5 %)	6 (11.1 %)	28 (10.2 %)
No answer	0 (0.0 %)	2 (5.9 %)	6 (12.2 %)	1 (1.7 %)	0 (0.0 %)	10 (18.5 %)	19 (6.9 %)

Table 3.3.27 Occurrence of Natural Disasters [Q.21]

	Nong Bua	Huai Pheung	Wiang Wai	Nong Sao	Mai Don Kaew	Pak Ing Tai	Total
	n = 25	n = 34	n = 49	n = 59	n = 53	n = 54	n = 274
Occurrence of Natural Disasters> (multiple answer possible)							
flooding	19	7	37	51	23	34	171
	(76.0 %)	(20.6 %)	(75.5 %)	(86.4 %)	(43.4 %)	(63.0 %)	(62.4 %)
drought	16	33	36	51	27	37	200
	(64.0 %)	(97.1 %)	(73.5 %)	(86.4 %)	(50.9 %)	(68.5 %)	(73.0 %)
wind damage	13	6	26	19	11	19	94
	(52.0 %)	(17.6 %)	(53.1 %)	(32.2 %)	(20.8 %)	(35.2 %)	(34.3 %)
erosion	2	2	8	2	0	14	28
	(8.0 %)	(5.9 %)	(16.3 %)	(3.4 %)	(0.0 %)	(25.9 %)	(10.2 %)
landslide	0	0	0	0	2	1	3
	(0.0 %)	(0.0 %)	(0.0 %)	(0.0 %)	(3.8 %)	(1.9 %)	(1.1 %)
others	2	0	0	0	1	0	3
	(8.0 %)	(0.0 %)	(0.0 %)	(0.0 %)	(1.9 %)	(0.0 %)	(1.1 %)
no answer	0	0	5	2	1	0	8
	(0.0 %)	(0.0 %)	(10.2 %)	(3.4 %)	(1.9 %)	(0.0 %)	(2.9 %)
Most Severe Natural Disaster							
flooding	11	6	20	32	17	19	105
	(44.0 %)	(17.6 %)	(40.8 %)	(54.2 %)	(32.1 %)	(35.2 %)	(38.3 %)
drought	6	28	17	25	22	22	120
	(24.0 %)	(82.4 %)	(34.7 %)	(42.4 %)	(41.5 %)	(40.7 %)	(43.8 %)
wind damage	2	0	5	2	9	3	21
	(8.0 %)	(0.0 %)	(10.2 %)	(3.4 %)	(17.0 %)	(5.6 %)	(7.7 %)
erosion	0	0	0	0	0	6	6
	(0.0 %)	(0.0 %)	(0.0 %)	(0.0 %)	(0.0 %)	(11.1 %)	(2.2 %)
landslide	0	0	0	0	1	0	1
	(0.0 %)	(0.0 %)	(0.0 %)	(0.0 %)	(1.9 %)	(0.0 %)	(0.4 %)
others	6	0	7	0	4	4	21
	(24.0 %)	(0.0 %)	(14.3 %)	(0.0 %)	(7.5 %)	(7.4 %)	(7.7 %)

Table 3.3.28 Wastewater at Home [Q.22]

Wastewater	Nong Bua	Huai Pheung	Wiang Wai	Nong Sao	Mai Don Kaew	Pak Ing Tai	Total
	n = 25	n = 34	n = 49	n = 59	n = 53	n = 54	n = 274
pour ground / hole / tree	23	30	49	58	51	49	260
	(92.0 %)	(88.2 %)	(100.0 %)	(98.3 %)	(96.2 %)	(90.7 %)	(94.9 %)
waste pond	1	4	0	0	2	3	10
	(4.0 %)	(11.8 %)	(0.0 %)	(0.0 %)	(3.8 %)	(5.6 %)	(3.6 %)
no answer	1	0	0	1	0	2	4
	(4.0 %)	(0.0 %)	(0.0 %)	(1.7 %)	(0.0 %)	(3.7 %)	(1.5 %)

Table 3.3.29 Protein Source [Q.23]

Source of Protein> (multiple answer possible)	Nong Bua	Huai Pheung	Wiang Wai	Nong Sao	Mai Don Kaew	Pak Ing Tai	Total
	n = 25	n = 34	n = 49	n = 59	n = 53	n = 54	n = 274
beef	17 (68.0 %)	18 (52.9 %)	36 (73.5 %)	44 (74.6 %)	50 (94.3 %)	25 (46.3 %)	190 (69.3 %)
bufaro	17 (68.0 %)	20 (58.8 %)	38 (77.6 %)	28 (47.5 %)	48 (90.6 %)	26 (48.1 %)	177 (64.6 %)
chicken	18 (72.0 %)	30 (88.2 %)	41 (83.7 %)	46 (78.0 %)	53 (100.0 %)	45 (83.3 %)	233 (85.0 %)
pork	20 (80.0 %)	34 (100.0 %)	45 (91.8 %)	51 (86.4 %)	53 (100.0 %)	51 (94.4 %)	254 (92.7 %)
fish	19 (76.0 %)	30 (88.2 %)	41 (83.7 %)	55 (93.2 %)	50 (94.3 %)	47 (87.0 %)	242 (88.3 %)
egg	17 (68.0 %)	34 (100.0 %)	39 (79.6 %)	50 (84.7 %)	53 (100.0 %)	44 (81.5 %)	237 (86.5 %)
duck	1 (4.0 %)	1 (2.9 %)	0 (0.0 %)	1 (1.7 %)	0 (0.0 %)	0 (0.0 %)	3 (1.1 %)
snake	1 (4.0 %)	3 (8.8 %)	0 (0.0 %)	0 (0.0 %)	0 (0.0 %)	1 (1.9 %)	5 (1.8 %)
frog	4 (16.0 %)	3 (8.8 %)	0 (0.0 %)	2 (3.4 %)	0 (0.0 %)	1 (1.9 %)	10 (3.6 %)
rat	1 (4.0 %)	2 (5.9 %)	2 (4.1 %)	3 (5.1 %)	0 (0.0 %)	1 (1.9 %)	9 (3.3 %)
snail / crab	0 (0.0 %)	0 (0.0 %)	0 (0.0 %)	2 (3.4 %)	0 (0.0 %)	0 (0.0 %)	2 (0.7 %)
No answer	0 (0.0 %)	1 (2.9 %)	4 (8.2 %)	2 (3.4 %)	4 (7.5 %)	2 (3.7 %)	13 (4.7 %)

Table 3.3.30 Protein Intake per Week [Q.23]

	Nong Bua	Huai Pheung	Wiang Wai	Nong Sao	Mai Don Kaew	Pak Ing Tai	Total
	n = 25	n = 34	n = 49	n = 59	n = 53	n = 54	n = 274
1-2	2 (8.0 %)	0 (0.0 %)	2 (4.1 %)	3 (5.1 %)	1 (1.9 %)	2 (3.7 %)	10 (3.6 %)
3-4	0 (0.0 %)	1 (2.9 %)	6 (12.2 %)	3 (5.1 %)	1 (1.9 %)	0 (0.0 %)	11 (4.0 %)
4-6	0 (0.0 %)	4 (11.8 %)	2 (4.1 %)	5 (8.5 %)	2 (3.8 %)	0 (0.0 %)	13 (4.7 %)
daily	22 (88.0 %)	29 (85.3 %)	39 (79.6 %)	48 (81.4 %)	49 (92.5 %)	49 (90.7 %)	236 (86.1 %)
no answer	1 (4.0 %)	0 (0.0 %)	0 (0.0 %)	0 (0.0 %)	0 (0.0 %)	3 (5.6 %)	4 (1.5 %)

Table 3.3.31 Major Concerns in Life [Q.24]

Concerns (multiple answer possible)	Nong Bua	Huai Pheung	Wiang Wai	Nong Sao	Mai Don Kaew	Pak Ing Tai	Total
	n = 25	n = 34	n = 49	n = 59	n = 53	n = 54	n = 274
difficulty in income generating	3 (12.0 %)	8 (23.5 %)	28 (57.1 %)	1 (1.7 %)	1 (1.9 %)	3 (5.6 %)	44 (16.1 %)
debt	5 (20.0 %)	10 (29.4 %)	28 (57.1 %)	10 (16.9 %)	3 (5.7 %)	1 (1.9 %)	57 (20.8 %)
imbalance b/w income and expenditures	2 (8.0 %)	0 (0.0 %)	0 (0.0 %)	22 (37.3 %)	0 (0.0 %)	31 (57.4 %)	55 (20.1 %)
money for children's education	2 (8.0 %)	4 (11.8 %)	10 (20.4 %)	0 (0.0 %)	5 (9.4 %)	6 (11.1 %)	27 (9.9 %)
illness	5 (20.0 %)	0 (0.0 %)	2 (4.1 %)	0 (0.0 %)	4 (7.5 %)	1 (1.9 %)	12 (4.4 %)
insufficient farming products	2 (8.0 %)	5 (14.7 %)	2 (4.1 %)	3 (5.1 %)	1 (1.9 %)	1 (1.9 %)	14 (5.1 %)
No concerns	4 (16.0 %)	1 (2.9 %)	7 (14.3 %)	0 (0.0 %)	18 (34.0 %)	10 (18.5 %)	40 (14.6 %)
No answer	2 (8.0 %)	6 (17.6 %)	0 (0.0 %)	23 (39.0 %)	21 (39.6 %)	1 (1.9 %)	53 (19.3 %)

(3)   Agriculture

Table 3.3.32 Landless Household [Q.25]

	Nong Bua	Huai Pheung	Wiang Wai	Nong Sao	Mai Don Kaew	Pak Ing Tai	Total
	n = 25	n = 34	n = 49	n = 59	n = 53	n = 54	n = 274
No. of HH without own land	2 (8.0 %)	8 (23.5 %)	4 (8.2 %)	10 (16.9 %)	6 (11.3 %)	6 (11.1 %)	36 (13.1 %)
No. of HH without own farmland	9 (36.0 %)	19 (55.9 %)	14 (28.6 %)	17 (28.8 %)	18 (34.0 %)	23 (42.6 %)	100 (36.5 %)
average land owned / HH (rai)	19.0	3.3	10.7	14.2	7.4	5.0	9.5
average land owned and rented / HH (rai)	21.4	3.5	12.8	15.8	8.0	5.4	10.7

Table 3.3.33 Soil Structure and Characteristics [Q.26,27]

	Nong Bua	Huai Pheung	Wiang Wai	Nong Sao	Mai Don Kaew	Pak Ing Tai	Total
	n = 25	n = 34	n = 49	n = 59	n = 53	n = 54	n = 274
Soil Structure							
loam	14 (56.0 %)	6 (17.6 %)	18 (36.7 %)	21 (35.6 %)	17 (32.1 %)	16 (29.6 %)	92 (33.6 %)
loamy sand	7 (28.0 %)	10 (29.4 %)	8 (16.3 %)	12 (20.3 %)	17 (32.1 %)	17 (31.5 %)	71 (25.9 %)
sand	0 (0.0 %)	2 (5.9 %)	1 (2.0 %)	0 (0.0 %)	3 (5.7 %)	1 (1.9 %)	7 (2.6 %)
mountain soil	0 (0.0 %)	9 (26.5 %)	5 (10.2 %)	10 (16.9 %)	4 (7.5 %)	4 (7.4 %)	32 (11.7 %)
clay	1 (4.0 %)	2 (5.9 %)	12 (24.5 %)	3 (5.1 %)	7 (13.2 %)	12 (22.2 %)	37 (13.5 %)
do not know / no answer	3 (12.0 %)	5 (14.7 %)	5 (10.2 %)	13 (22.0 %)	5 (9.4 %)	4 (7.4 %)	35 (12.8 %)
Soil Characteristics							
coarse grain	5 (20.0 %)	8 (23.5 %)	11 (22.4 %)	13 (22.0 %)	9 (17.0 %)	10 (18.5 %)	56 (20.4 %)
moderate grain	3 (12.0 %)	13 (38.2 %)	8 (16.3 %)	19 (32.2 %)	28 (52.8 %)	18 (33.3 %)	89 (32.5 %)
fine grain	12 (48.0 %)	10 (29.4 %)	25 (51.0 %)	20 (33.9 %)	11 (20.8 %)	12 (22.2 %)	90 (32.8 %)
do not know / no answer	5 (20.0 %)	3 (8.8 %)	5 (10.2 %)	7 (11.9 %)	5 (9.4 %)	14 (25.9 %)	39 (14.2 %)

Table 3.3.34 Location of Farmland, Size of Farmland and Number of Parcels [Q.28]

	Nong Bua	Huai Pheung	Wiang Wai	Nong Sao	Mai Don Kaew	Pak Ing Tai	Total
	n = 25	n = 34	n = 49	n = 59	n = 53	n = 54	n = 274
Upland (flat)							
No. of HH with farmland	3 (12.0 %)	18 (52.9 %)	23 (46.9 %)	31 (52.5 %)	16 (30.2 %)	19 (35.2 %)	110 (40.1 %)
average farm size	6.5	4.2	7.5	9.3	5.1	4.2	6.5
average no. of parcels	1	1.3	1.4	1.8	1	1.4	1.4
Upland (slope)							
No. of HH with farmland	0 (0.0 %)	3 (8.8 %)	6 (12.2 %)	9 (15.3 %)	5 (9.4 %)	4 (7.4 %)	27 (9.9 %)
average farm size	-	4	6.4	12.5	4.2	6.5	7.8
average no. of parcels	-	1.3	1	1.2	1	2.2	1.3
low land							
No. of HH with farmland	21 (84.0 %)	26 (76.5 %)	40 (81.6 %)	51 (86.4 %)	38 (71.7 %)	32 (59.3 %)	208 (75.9 %)
average farm size	17.8	13.3	17.3	16.4	19.2	14.1	16.5
average no. of parcels	1.7	1.4	1.4	1.2	1.8	2.9	1.7
swamp							
No. of HH with farmland	3 (12.0 %)	8 (23.5 %)	4 (8.2 %)	1 (1.7 %)	4 (7.5 %)	3 (5.6 %)	23 (8.4 %)
average farm size	2.7	7.3	3.4	3	3	2.2	4.4
average no. of parcels	1	2.2	1	1	1	1	1.4

Table 3.3.35 Agricultural Machines and Tools [Q.29]

	Nong Bua	Huai Pheung	Wiang Wai	Nong Sao	Mai Don Kaew	Pak Ing Tai	Total
	n = 25	n = 34	n = 49	n = 59	n = 53	n = 54	n = 274
Agricultural Machines							
tractor	0	1	2	0	1	0	4
	(0.0 %)	(2.9 %)	(4.1 %)	(0.0 %)	(1.9 %)	(0.0 %)	(1.5 %)
thresher	3	0	2	1	0	0	6
	(12.0 %)	(0.0 %)	(4.1 %)	(1.7 %)	(0.0 %)	(0.0 %)	(2.2 %)
tiller	3	7	15	35	12	3	75
	(12.0 %)	(20.6 %)	(30.6 %)	(59.3 %)	(22.6 %)	(5.6 %)	(27.4 %)
trailer	3	3	10	4	3	3	26
	(12.0 %)	(8.8 %)	(20.4 %)	(6.8 %)	(5.7 %)	(5.6 %)	(9.5 %)
rice mill	0	0	0	2	0	0	2
	(0.0 %)	(0.0 %)	(0.0 %)	(3.4 %)	(0.0 %)	(0.0 %)	(0.7 %)
water pump	8	8	22	24	28	11	101
	(32.0 %)	(23.5 %)	(44.9 %)	(40.7 %)	(52.8 %)	(20.4 %)	(36.9 %)
E-tan	1	1	3	10	3	1	19
	(4.0 %)	(2.9 %)	(6.1 %)	(16.9 %)	(5.7 %)	(1.9 %)	(6.9 %)
Agricultural Tools							
hoe	25	27	45	58	41	47	243
	(100.0 %)	(79.4 %)	(91.8 %)	(98.3 %)	(77.4 %)	(87.0 %)	(88.7 %)
sickle	25	29	47	57	35	31	224
	(100.0 %)	(85.3 %)	(95.9 %)	(96.6 %)	(66.0 %)	(57.4 %)	(81.8 %)
harrow	11	10	19	24	16	16	96
	(44.0 %)	(29.4 %)	(38.8 %)	(40.7 %)	(30.2 %)	(29.6 %)	(35.0 %)
hand sprayer	8	18	4	13	9	28	80
	(32.0 %)	(52.9 %)	(8.2 %)	(22.0 %)	(17.0 %)	(51.9 %)	(29.2 %)
sprayer	2	3	1	0	1	5	12
	(8.0 %)	(8.8 %)	(2.0 %)	(0.0 %)	(1.9 %)	(9.3 %)	(4.4 %)
spade	2	0	8	8	0	11	29
	(8.0 %)	(0.0 %)	(16.3 %)	(13.6 %)	(0.0 %)	(20.4 %)	(10.6 %)

Table 3.3.36 Livestock: Type and Number of Animals [Q.30]

		Nong Bua	Huai Pheung	Wiang Wai	Nong Sao	Mai Don Kaew	Pak Ing Tai	Total
		n = 25	n = 34	n = 49	n = 59	n = 53	n = 54	n = 274
cow		4	22	3	4	0	3	36
		(16.0 %)	(64.7 %)	(6.1 %)	(6.8 %)	(0.0 %)	(5.6 %)	(13.1 %)
	1-4	1	21	3	4		3	32
	5-9	3	0					3
	10-14		1					1
buffalo		0	0	2	0	0	0	2
		(0.0 %)	(0.0 %)	(4.1 %)	(0.0 %)	(0.0 %)	(0.0 %)	(0.7 %)
	1-4			2				2
pig		0	0	1	2	8	1	12
		(0.0 %)	(0.0 %)	(2.0 %)	(3.4 %)	(15.1 %)	(1.9 %)	(4.4 %)
	1-4			1	1		1	3
	5-9					3		3
	10-14					2		2
	15-				1	3		4
chicken		23	24	43	50	41	50	231
		(92.0 %)	(70.6 %)	(87.8 %)	(84.7 %)	(77.4 %)	(92.6 %)	(84.3 %)
	1-4	2	2	20	20	5	25	74
	5-9	5	11	7	3	6	3	35
	10-14	3	2	16	8	5	12	46
	15-	13	9		19	25	10	76
duck		11	1	2	6	0	3	23
		(44.0 %)	(2.9 %)	(4.1 %)	(10.2 %)	(0.0 %)	(5.6 %)	(8.4 %)
	1 - 4	3	1	2	6		3	15
	5 - 9	6						6
	10 - 14	2						2
rabbit		0	5	0	0	0	0	5
		(0.0 %)	(14.7 %)	(0.0 %)	(0.0 %)	(0.0 %)	(0.0 %)	(1.8 %)
	1 - 4		5					5

Table 3.3.37 Aquaculture [Q.31, 32-2]

	Nong Bua	Huai Pheung	Wiang Wai	Nong Sao	Mai Don Kaew	Pak Ing Tai	Total
	n = 25	n = 34	n = 49	n = 59	n = 53	n = 54	n = 274
No. of Household with Aquaculture, Number of Pond and Pond Size							
number of HH with aquaculture	6 (24.0 %)	10 (29.4 %)	12 (24.5 %)	13 (22.0 %)	7 (13.2 %)	4 (7.4 %)	52 (19.0 %)
number of pond 1-2	6	10	12	12	5	4	49
3-4				1	2		3
average pond size (rai)	1.4	0.8	1.8	0.5	0.2	0.3	0.9
Desire for Making Fish Pond							
yes	15 (60.0 %)	13 (38.2 %)	40 (81.6 %)	11 (18.6 %)	15 (28.3 %)	23 (42.6 %)	117 (42.7 %)
no	10 (40.0 %)	21 (61.8 %)	9 (18.4 %)	48 (81.4 %)	38 (71.7 %)	28 (51.9 %)	154 (56.2 %)
no answer	0 (0.0 %)	0 (0.0 %)	0 (0.0 %)	0 (0.0 %)	0 (0.0 %)	3 (5.6 %)	3 (1.1 %)
Type of Fish Feed	n = 6	n = 10	n = 12	n = 13	n = 7	n = 4	n = 52
natural (no special feeding)	2 (33.3 %)	4 (40.0 %)	7 (58.3 %)	12 (92.3 %)	5 (71.4 %)	0 (0.0 %)	30 (57.7 %)
pellet	4 (66.7 %)	2 (20.0 %)	3 (25.0 %)	1 (7.7 %)	2 (28.6 %)	0 (0.0 %)	12 (23.1 %)
natural + pellet	0 (0.0 %)	0 (0.0 %)	1 (8.3 %)	0 (0.0 %)	0 (0.0 %)	1 (25.0 %)	2 (3.8 %)
no answer	0 (0.0 %)	4 (40.0 %)	1 (8.3 %)	0 (0.0 %)	0 (0.0 %)	3 (75.0 %)	8 (15.4 %)

Table 3.3.38 Aquacultural Problems [Q.32-1]

	Nong Bua	Huai Pheung	Wiang Wai	Nong Sao	Mai Don Kaew	Pak Ing Tai	Total
	n = 6	n = 10	n = 12	n = 13	n = 7	n = 4	n = 52
Existence of Problems							
problems	4 (66.7 %)	4 (40.0 %)	6 (50.0 %)	9 (69.2 %)	2 (28.6 %)	3 (75.0 %)	28 (53.8 %)
no problems	2 (33.3 %)	6 (60.0 %)	6 (50.0 %)	4 (30.8 %)	5 (71.4 %)	1 (25.0 %)	24 (46.2 %)
Types of Problems (multiple answer possible)							
flooding	2 (33.3 %)	0 (0.0 %)	1 (8.3 %)	0 (0.0 %)	1 (14.3 %)	0 (0.0 %)	4 (7.7 %)
stealing fish	1 (16.7 %)	0 (0.0 %)	4 (33.3 %)	1 (7.7 %)	1 (14.3 %)	0 (0.0 %)	7 (13.5 %)
leakage	1 (16.7 %)	0 (0.0 %)	0 (0.0 %)	0 (0.0 %)	0 (0.0 %)	0 (0.0 %)	1 (1.9 %)
high cost of feeds	0 (0.0 %)	0 (0.0 %)	1 (8.3 %)	1 (7.7 %)	0 (0.0 %)	0 (0.0 %)	2 (3.8 %)
insufficient growth	0 (0.0 %)	0 (0.0 %)	1 (8.3 %)	1 (7.7 %)	0 (0.0 %)	0 (0.0 %)	2 (3.8 %)
shallowness of pond	0 (0.0 %)	0 (0.0 %)	1 (8.3 %)	0 (0.0 %)	0 (0.0 %)	0 (0.0 %)	1 (1.9 %)
no answer	0 (0.0 %)	4 (40.0 %)	0 (0.0 %)	6 (46.2 %)	0 (0.0 %)	3 (75.0 %)	13 (25.0 %)

Table 3.3.39 Agricultural Problems [Q.33]

Types of Problems	Nong Bua	Huai Pheung	Wiang Wai	Nong Sao	Mai Don Kaew	Pak Ing Tai	Total
	n = 25	n = 34	n = 49	n = 59	n = 53	n = 54	n = 274
lack of farmland	15	16	14	16	18	16	95
	(60.0 %)	(47.1 %)	(28.6 %)	(27.1 %)	(34.0 %)	(29.6 %)	(34.7 %)
lack of irrigation water	18	30	23	44	31	25	171
	(72.0 %)	(88.2 %)	(46.9 %)	(74.6 %)	(58.5 %)	(46.3 %)	(62.4 %)
poor drainage	9	1	8	12	14	9	53
	(36.0 %)	(2.9 %)	(16.3 %)	(20.3 %)	(26.4 %)	(16.7 %)	(19.3 %)
lack of funds	17	24	26	30	21	22	140
	(68.0 %)	(70.6 %)	(53.1 %)	(50.8 %)	(39.6 %)	(40.7 %)	(51.1 %)
poor marketing system	11	13	9	17	18	8	76
	(44.0 %)	(38.2 %)	(18.4 %)	(28.8 %)	(34.0 %)	(14.8 %)	(27.7 %)
insufficient farm input	17	0	22	23	15	15	92
	(68.0 %)	(0.0 %)	(44.9 %)	(39.0 %)	(28.3 %)	(27.8 %)	(33.6 %)
irregular topography of farmland	2	2	8	0	0	3	15
	(8.0 %)	(5.9 %)	(16.3 %)	(0.0 %)	(0.0 %)	(5.6 %)	(5.5 %)
poor soil	5	3	1	5	0	0	14
	(20.0 %)	(8.8 %)	(2.0 %)	(8.5 %)	(0.0 %)	(0.0 %)	(5.1 %)
poor management	2	1	0	0	0	0	3
	(8.0 %)	(2.9 %)	(0.0 %)	(0.0 %)	(0.0 %)	(0.0 %)	(1.1 %)
insect	14	18	41	25	28	6	132
	(56.0 %)	(52.9 %)	(83.7 %)	(42.4 %)	(52.8 %)	(11.1 %)	(48.2 %)
plant disease	13	30	29	25	20	6	123
	(52.0 %)	(88.2 %)	(59.2 %)	(42.4 %)	(37.7 %)	(11.1 %)	(44.9 %)

Table 3.3.40 Crops: Number of Household Planted the Crop and Average Planted Area* (Rainy Season) [Q.34]

	Nong Bua	Huai Pheung	Wiang Wai	Nong Sao	Mai Don Kaew	Pak Ing Tai	Total
	n = 25	n = 34	n = 49	n = 59	n = 53	n = 54	n = 274
paddy rice	25	26	41	58	39	7	196
	(100.0 %)	(76.5 %)	(83.7 %)	(98.3 %)	(73.6 %)	(13.0 %)	(71.5 %)
average area	17.5	6.4	12.4	17.8	7.3	7.1	12.6
upland rice	0	0	3	0	0	2	5
	(0.0 %)	(0.0 %)	(6.1 %)	(0.0 %)	(0.0 %)	(3.7 %)	(1.8 %)
average area	-	-	8.1	-	-	3.2	6.1
maize	12	4	26	26	6	26	100
	(48.0 %)	(11.8 %)	(53.1 %)	(44.1 %)	(11.3 %)	(48.1 %)	(36.5 %)
average area	12.4	3.1	5.3	8.3	4.4	6.4	7.1
ground nut	0	2	8	0	0	2	12
	(0.0 %)	(5.9 %)	(16.3 %)	(0.0 %)	(0.0 %)	(3.7 %)	(4.4 %)
average area	-	2.2	2.8	-	-	1.5	2.5
cassava	1	0	0	1	0	0	2
	(4.0 %)	(0.0 %)	(0.0 %)	(1.7 %)	(0.0 %)	(0.0 %)	(0.7 %)
average area	7.0	-	-	3.0	-	-	5.0
vegetables	4	15	8	6	4	20	57
	(16.0 %)	(44.1 %)	(16.3 %)	(10.2 %)	(7.5 %)	(37.0 %)	(20.8 %)
average area	1.5	1.4	1.7	1.3	1.4	2.5	1.8
fruit	4	9	1	15	9	17	55
	(16.0 %)	(26.5 %)	(2.0 %)	(25.4 %)	(17.0 %)	(31.5 %)	(20.1 %)
average area	7.2	3.2	3.0	8.2	4.5	4.2	5.4
soya bean	0	0	1	0	0	0	1
	(0.0 %)	(0.0 %)	(2.0 %)	(0.0 %)	(0.0 %)	(0.0 %)	(0.4 %)
average area	-	-	3.0	-	-	-	3.0
black bean	0	0	0	1	0	0	1
	(0.0 %)	(0.0 %)	(0.0 %)	(1.7 %)	(0.0 %)	(0.0 %)	(0.4 %)
average area	-	-	-	3.0	-	-	3.0
tobacco	0	0	0	0	1	0	1
	(0.0 %)	(0.0 %)	(0.0 %)	(0.0 %)	(1.9 %)	(0.0 %)	(0.4 %)
average area	-	-	-	-	4.0	-	4.0

* Among those who plant the crop.

Table 3.3.41 Crops: Number of Household Planted the Crop and Average Planted Area* (Dry Season) [Q.34]

	Nong Bua	Huai Pheung	Wiang Wai	Nong Sao	Mai Don Kaew	Pak Ing Tai	Total
	n = 25	n = 34	n = 49	n = 59	n = 53	n = 54	n = 274
paddy rice	0	0	0	0	0	0	0
	(0.0 %)	(0.0 %)	(0.0 %)	(0.0 %)	(0.0 %)	(0.0 %)	(0.0 %)
average area	-	-	-	-	-	-	-
upland rice	0	0	0	0	0	0	0
	(0.0 %)	(0.0 %)	(0.0 %)	(0.0 %)	(0.0 %)	(0.0 %)	(0.0 %)
average area	-	-	-	-	-	-	-
maize	0	1	0	0	1	3	5
	(0.0 %)	(2.9 %)	(0.0 %)	(0.0 %)	(1.9 %)	(5.6 %)	(1.8 %)
average area	-	3.0	-	-	3.0	6.8	5.3
ground nut	0	2	0	0	0	3	5
	(0.0 %)	(5.9 %)	(0.0 %)	(0.0 %)	(0.0 %)	(5.6 %)	(1.8 %)
average area	-	13.5	-	-	-	3.4	7.4
cassava	0	0	0	0	0	0	0
	(0.0 %)	(0.0 %)	(0.0 %)	(0.0 %)	(0.0 %)	(0.0 %)	(0.0 %)
average area	-	-	-	-	-	-	-
vegetables	3	1	0	0	0	1	5
	(12.0 %)	(2.9 %)	(0.0 %)	(0.0 %)	(0.0 %)	(1.9 %)	(1.8 %)
average area	0.8	0.8	-	-	-	1.0	0.8
fruit	4	9	1	15	9	17	55
	(16.0 %)	(26.5 %)	(2.0 %)	(25.4 %)	(17.0 %)	(31.5 %)	(20.1 %)
average area	7.2	3.2	3.0	8.2	4.5	4.2	5.4
soya bean	0	0	0	0	0	0	0
	(0.0 %)	(0.0 %)	(0.0 %)	(0.0 %)	(0.0 %)	(0.0 %)	(0.0 %)
average area	-	-	-	-	-	-	-
black bean	0	0	0	0	0	0	0
	(0.0 %)	(0.0 %)	(0.0 %)	(0.0 %)	(0.0 %)	(0.0 %)	(0.0 %)
average area	-	-	-	-	-	-	-
tobacco	0	0	0	0	0	0	0
	(0.0 %)	(0.0 %)	(0.0 %)	(0.0 %)	(0.0 %)	(0.0 %)	(0.0 %)
average area	-	-	-	-	-	-	-

* Among those who plant the crop.

Table 3.3.42 Use of Pesticides and Fertiliser [Q.35]

	Nong Bua	Huai Pheung	Wiang Wai	Nong Sao	Mai Don Kaew	Pak Ing Tai	Total
	n = 25	n = 34	n = 49	n = 59	n = 53	n = 54	n = 274
Insecticide			*				
using	16 (64.0 %)	11 (32.4 %)	7 (14.3 %)	23 (39.0 %)	13 (24.5 %)	30 (55.6 %)	100 (36.5 %)
not using	5 (20.0 %)	23 (67.6 %)	34 (69.4 %)	36 (61.0 %)	40 (75.5 %)	24 (44.4 %)	162 (59.1 %)
Herbicide			*				
using	11 (44.0 %)	8 (23.5 %)	12 (24.5 %)	21 (35.6 %)	19 (35.8 %)	14 (25.9 %)	85 (31.0 %)
not using	14 (56.0 %)	26 (76.5 %)	29 (59.2 %)	38 (64.4 %)	34 (64.2 %)	40 (74.1 %)	181 (66.1 %)
Fungicide							
using	2 (8.0 %)	3 (8.8 %)	8 (16.3 %)	2 (3.4 %)	0 (0.0 %)	10 (18.5 %)	25 (9.1 %)
not using	23 (92.0 %)	31 (91.2 %)	41 (83.7 %)	57 (96.6 %)	53 (100.0 %)	44 (81.5 %)	249 (90.9 %)
Rodenticide			*				
using	8 (32.0 %)	7 (20.6 %)	13 (26.5 %)	27 (45.8 %)	12 (22.6 %)	19 (35.2 %)	86 (31.4 %)
not using	17 (68.0 %)	27 (79.4 %)	28 (57.1 %)	32 (54.2 %)	41 (77.4 %)	35 (64.8 %)	180 (65.7 %)
Fertiliser / Manure			*				
using	25 (100.0 %)	24 (70.6 %)	37 (75.5 %)	58 (98.3 %)	38 (71.7 %)	40 (74.1 %)	222 (81.0 %)
use of manure	(2) (8.0 %)	(0) (0.0 %)	(2) (4.1 %)	(0) (0.0 %)	(0) (0.0 %)	(2) (3.7 %)	(6) (2.2 %)
not using	0 (0.0 %)	10 (29.4 %)	4 (8.2 %)	1 (1.7 %)	15 (28.3 %)	14 (25.9 %)	44 (16.1 %)

* In Wiang Wai, 8 respondents did not respond to the question.

Table 3.3.43 Way of Obtaining Pesticide and Fertilizer [Q.35]

	Nong Bua	Huai Pheung	Wiang Wai	Nong Sao	Mai Don Kaew	Pak Ing Tai	Total
	n = 25	n = 34	n = 49	n = 59	n = 53	n = 54	n = 274
Purchasing at / from market in town	14 (56.0 %)	24 (70.6 %)	35 (71.4 %)	36 (61.0 %)	4 (7.5 %)	10 (18.5 %)	123 (44.9 %)
market in village	0 (0.0 %)	6 (17.6 %)	1 (2.0 %)	0 (0.0 %)	18 (34.0 %)	6 (11.1 %)	31 (11.3 %)
Co-operative shop	4 (16.0 %)	0 (0.0 %)	4 (8.2 %)	3 (5.1 %)	0 (0.0 %)	0 (0.0 %)	11 (4.0 %)
BAAC	7 (28.0 %)	4 (11.8 %)	0 (0.0 %)	30 (50.8 %)	3 (5.7 %)	5 (9.3 %)	49 (17.9 %)
middleman	0 (0.0 %)	0 (0.0 %)	0 (0.0 %)	0 (0.0 %)	0 (0.0 %)	4 (7.4 %)	4 (1.5 %)
agricultural office	0 (0.0 %)	0 (0.0 %)	0 (0.0 %)	0 (0.0 %)	0 (0.0 %)	14 (25.9 %)	14 (5.1 %)
Distributed from contracted company	0 (0.0 %)	0 (0.0 %)	0 (0.0 %)	0 (0.0 %)	0 (0.0 %)	2 (3.7 %)	2 (0.7 %)
No answer	0 (0.0 %)	0 (0.0 %)	9 (18.4 %)	0 (0.0 %)	13 (24.5 %)	13 (24.1 %)	35 (12.8 %)

Table 3.3.44 Marketing Agricultural Products [Q.36,37,38,40,41]

	Nong Bua	Huai Pheung	Wiang Wai	Nong Sao	Mai Don Kaew	Pak Ing Tai	Total
	n = 25	n = 34	n = 49	n = 59	n = 53	n = 54	n = 274
Method of Marketing (multiple answer possible)							
by farmers	5	10	4	4	0	3	26
	(20.0 %)	(29.4 %)	(8.2 %)	(6.8 %)	(0.0 %)	(5.6 %)	(9.5 %)
through middleman	20	20	35	50	26	39	190
	(80.0 %)	(58.8 %)	(71.4 %)	(84.7 %)	(49.1 %)	(72.2 %)	(69.3 %)
no answer	0	4	10	5	27	12	58
	(0.0 %)	(11.8 %)	(20.4 %)	(8.5 %)	(50.9 %)	(22.2 %)	(21.2 %)
Price Determination							
through bargaining	0	1	1	1	3	0	6
	(0.0 %)	(2.9 %)	(2.0 %)	(1.7 %)	(5.7 %)	(0.0 %)	(2.2 %)
market price	10	23	15	25	7	14	94
	(40.0 %)	(67.6 %)	(30.6 %)	(42.4 %)	(13.2 %)	(25.9 %)	(34.3 %)
guarantee*	12	9	23	27	28	28	127
	(48.0 %)	(26.5 %)	(46.9 %)	(45.8 %)	(52.8 %)	(51.9 %)	(46.4 %)
no answer	3	1	10	6	15	12	47
	(12.0 %)	(2.9 %)	(20.4 %)	(10.2 %)	(28.3 %)	(22.2 %)	(17.2 %)
Satisfaction of Selling Price							
normally satisfied	10	14	16	20	18	19	97
	(40.0 %)	(41.2 %)	(32.7 %)	(33.9 %)	(34.0 %)	(35.2 %)	(35.4 %)
not satisfied	12	14	23	33	23	24	129
	(48.0 %)	(41.2 %)	(46.9 %)	(55.9 %)	(43.4 %)	(44.4 %)	(47.1 %)
no answer	3	6	10	6	12	11	48
	(12.0 %)	(17.6 %)	(20.4 %)	(10.2 %)	(22.6 %)	(20.4 %)	(17.5 %)

Usually as a group of farmers they negotiate a guaranteed price.

Table 3.3.44 Marketing Agricultural Products (continued)

	Nong Bua	Huai Pheung	Wiang Wai	Nong Sao	Mai Don Kaew	Pak Ing Tai	Total
	n = 25	n = 34	n = 49	n = 59	n = 53	n = 54	n = 274
Easy Crops to Sell (multiple answer possible)							
rice	16	19	28	49	18	1	131
	(64.0 %)	(55.9 %)	(57.1 %)	(83.1 %)	(34.0 %)	(1.9 %)	(47.8 %)
maize	2	2	18	20	6	17	65
	(8.0 %)	(5.9 %)	(36.7 %)	(33.9 %)	(11.3 %)	(31.5 %)	(23.7 %)
tobacco	0	2	0	0	0	5	7
	(0.0 %)	(5.9 %)	(0.0 %)	(0.0 %)	(0.0 %)	(9.3 %)	(2.6 %)
beans	0	0	7	0	0	4	11
	(0.0 %)	(0.0 %)	(14.3 %)	(0.0 %)	(0.0 %)	(7.4 %)	(4.0 %)
fruit	4	0	0	5	4	9	22
	(16.0 %)	(0.0 %)	(0.0 %)	(8.5 %)	(7.5 %)	(16.7 %)	(8.0 %)
vegetables	2	23	3	3	8	28	67
	(8.0 %)	(67.6 %)	(6.1 %)	(5.1 %)	(15.1 %)	(51.9 %)	(24.5 %)
no answer	1	1	12	6	17	14	51
	(4.0 %)	(2.9 %)	(24.5 %)	(10.2 %)	(32.1 %)	(25.9 %)	(18.6 %)
Reason for Selecting Customers (multiple answer possible)							
reasonable price	13	18	29	31	18	20	129
	(52.0 %)	(52.9 %)	(59.2 %)	(52.5 %)	(34.0 %)	(37.0 %)	(47.1 %)
connection with influential person	1	0	0	0	4	0	5
	(4.0 %)	(0.0 %)	(0.0 %)	(0.0 %)	(7.5 %)	(0.0 %)	(1.8 %)
approached by customer	5	9	4	8	11	5	42
	(20.0 %)	(26.5 %)	(8.2 %)	(13.6 %)	(20.8 %)	(9.3 %)	(15.3 %)
others	3	3	2	8	0	3	19
	(12.0 %)	(8.8 %)	(4.1 %)	(13.6 %)	(0.0 %)	(5.6 %)	(6.9 %)
no reason	5	3	2	8	4	13	35
	(20.0 %)	(8.8 %)	(4.1 %)	(13.6 %)	(7.5 %)	(24.1 %)	(12.8 %)
no answer	2	2	12	5	16	13	50
	(8.0 %)	(5.9 %)	(24.5 %)	(8.5 %)	(30.2 %)	(24.1 %)	(18.2 %)

Table 3.3.45 Post-harvest Measures [Q.39]

	Nong Bua	Huai Pheung	Wiang Wai	Nong Sao	Mai Don Kaew	Pak Ing Tai	Total
	n = 25	n = 34	n = 49	n = 59	n = 53	n = 54	n = 274
Taking Post-harvest Measures							
yes	6	12	19	36	13	8	94
	(24.0 %)	(35.3 %)	(38.8 %)	(61.0 %)	(24.5 %)	(14.8 %)	(34.3 %)
no	17	21	23	23	27	35	146
	(68.0 %)	(61.8 %)	(46.9 %)	(39.0 %)	(50.9 %)	(64.8 %)	(53.3 %)
no answer	2	1	7	0	13	11	34
	(8.0 %)	(2.9 %)	(14.3 %)	(0.0 %)	(24.5 %)	(20.4 %)	(12.4 %)
Types of Post-harvest Measures (multiple answer possible)							
threshing	2	0	0	10	11	0	23
	(8.0 %)	(0.0 %)	(0.0 %)	(16.9 %)	(20.8 %)	(0.0 %)	(8.4 %)
drying	2	11	16	10	2	4	45
	(8.0 %)	(32.4 %)	(32.7 %)	(16.9 %)	(3.8 %)	(7.4 %)	(16.4 %)
streaming	2	0	0	2	0	0	4
	(8.0 %)	(0.0 %)	(0.0 %)	(3.4 %)	(0.0 %)	(0.0 %)	(1.5 %)
box/sack packing	0	1	0	5	0	2	8
	(0.0 %)	(2.9 %)	(0.0 %)	(8.5 %)	(0.0 %)	(3.7 %)	(2.9 %)
grinding	0	0	3	2	0	2	7
	(0.0 %)	(0.0 %)	(6.1 %)	(3.4 %)	(0.0 %)	(3.7 %)	(2.6 %)
ripening	0	0	0	3	0	0	3
	(0.0 %)	(0.0 %)	(0.0 %)	(5.1 %)	(0.0 %)	(0.0 %)	(1.1 %)
no answer	0	0	0	4	0	0	4
	(0.0 %)	(0.0 %)	(0.0 %)	(6.8 %)	(0.0 %)	(0.0 %)	(1.5 %)
Desire for Post-harvest Measures (among who do not currently undertake any post-harvest measures)							
	n = 17	n = 21	n = 23	n = 23	n = 27	n = 35	n = 146
yes	5	3	8	2	7	6	31
	(29.4 %)	(14.3 %)	(34.8 %)	(8.7 %)	(25.9 %)	(17.1 %)	(21.2 %)
no	6	12	14	21	3	19	75
	(35.3 %)	(57.1 %)	(60.9 %)	(91.3 %)	(11.1 %)	(54.3 %)	(51.4 %)
no answer	6	6	1	0	17	10	40
	(35.3 %)	(28.6 %)	(4.3 %)	(0.0 %)	(63.0 %)	(28.6 %)	(27.4 %)

Table 3.3.46 Access to Marketing Information [Q.42]

Source of Information (multiple answer possible)	Nong Bua	Huai Pheung	Wiang Wai	Nong Sao	Mai Don Kaew	Pak Ing Tai	Total
	n = 25	n = 34	n = 49	n = 59	n = 53	n = 54	n = 274
radio	7 (28.0 %)	3 (8.8 %)	4 (8.2 %)	12 (20.3 %)	15 (28.3 %)	0 (0.0 %)	41 (15.0 %)
TV economic news	8 (32.0 %)	11 (32.4 %)	16 (32.7 %)	24 (40.7 %)	21 (39.6 %)	12 (22.2 %)	92 (33.6 %)
newspaper	3 (12.0 %)	1 (2.9 %)	0 (0.0 %)	0 (0.0 %)	3 (5.7 %)	0 (0.0 %)	7 (2.6 %)
word-of-mouth communication	16 (64.0 %)	22 (64.7 %)	36 (73.5 %)	39 (66.1 %)	14 (26.4 %)	22 (40.7 %)	149 (54.4 %)
farmers' group	0 (0.0 %)	2 (5.9 %)	0 (0.0 %)	4 (6.8 %)	2 (3.8 %)	2 (3.7 %)	10 (3.6 %)
government officer	0 (0.0 %)	0 (0.0 %)	0 (0.0 %)	0 (0.0 %)	4 (7.5 %)	1 (1.9 %)	5 (1.8 %)
middleman	0 (0.0 %)	0 (0.0 %)	0 (0.0 %)	2 (3.4 %)	2 (3.8 %)	4 (7.4 %)	8 (2.9 %)
not specific	0 (0.0 %)	6 (17.6 %)	0 (0.0 %)	0 (0.0 %)	0 (0.0 %)	0 (0.0 %)	6 (2.2 %)
no access	0 (0.0 %)	0 (0.0 %)	0 (0.0 %)	0 (0.0 %)	2 (3.8 %)	5 (9.3 %)	7 (2.6 %)
no answer	3 (12.0 %)	2 (5.9 %)	8 (16.3 %)	4 (6.8 %)	7 (13.2 %)	12 (22.2 %)	36 (13.1 %)

Table 3.3.47 Major Marketing Problems [Q.44-1]

Type of Problems (multiple answer possible)	Nong Bua	Huai Pheung	Wiang Wai	Nong Sao	Mai Don Kaew	Pak Ing Tai	Total
	n = 25	n = 34	n = 49	n = 59	n = 53	n = 54	n = 274
price fluctuation	11 (44.0 %)	15 (44.1 %)	23 (46.9 %)	38 (64.4 %)	19 (35.8 %)	23 (42.6 %)	129 (47.1 %)
lack of storage	2 (8.0 %)	6 (17.6 %)	5 (10.2 %)	3 (5.1 %)	8 (15.1 %)	3 (5.6 %)	27 (9.9 %)
low demand of product	0 (0.0 %)	5 (14.7 %)	2 (4.1 %)	7 (11.9 %)	2 (3.8 %)	1 (1.9 %)	17 (6.2 %)
lack of transportation	4 (16.0 %)	4 (11.8 %)	11 (22.4 %)	5 (8.5 %)	7 (13.2 %)	4 (7.4 %)	35 (12.8 %)
bad road	2 (8.0 %)	0 (0.0 %)	4 (8.2 %)	1 (1.7 %)	1 (1.9 %)	1 (1.9 %)	9 (3.3 %)
middleman	11 (44.0 %)	14 (41.2 %)	21 (42.9 %)	34 (57.6 %)	17 (32.1 %)	14 (25.9 %)	111 (40.5 %)
lack of market	0 (0.0 %)	5 (14.7 %)	6 (12.2 %)	6 (10.2 %)	2 (3.8 %)	4 (7.4 %)	23 (8.4 %)
lack of post-harvest measures	2 (8.0 %)	4 (11.8 %)	3 (6.1 %)	6 (10.2 %)	3 (5.7 %)	2 (3.7 %)	20 (7.3 %)
No problem	5 (20.0 %)	4 (11.8 %)	4 (8.2 %)	9 (15.3 %)	8 (15.1 %)	5 (9.3 %)	35 (12.8 %)
No answer	0 (0.0 %)	0 (0.0 %)	8 (16.3 %)	0 (0.0 %)	0 (0.0 %)	14 (25.9 %)	22 (8.0 %)

Table 3.3.48 Access to Information on Agricultural Extension and Promotion [Q.43,44-2]

	Nong Bua	Huai Pheung	Wiang Wai	Nong Sao	Mai Don Kaew	Pak Ing Tai	Total
	n = 25	n = 34	n = 49	n = 59	n = 53	n = 54	n = 274
Source of Information (multiple answer possible)							
radio	2	1	1	5	7	1	17
	(8.0 %)	(2.9 %)	(2.0 %)	(8.5 %)	(13.2 %)	(1.9 %)	(6.2 %)
TV programme	15	21	16	16	13	13	94
	(60.0 %)	(61.8 %)	(32.7 %)	(27.1 %)	(24.5 %)	(24.1 %)	(34.3 %)
newspaper	0	0	2	0	0	2	4
	(0.0 %)	(0.0 %)	(4.1 %)	(0.0 %)	(0.0 %)	(3.7 %)	(1.5 %)
meetings (private/ government)	6	7	12	22	12	17	76
	(24.0 %)	(20.6 %)	(24.5 %)	(37.3 %)	(22.6 %)	(31.5 %)	(27.7 %)
neighbours' suggestions	7	13	15	18	11	24	88
	(28.0 %)	(38.2 %)	(30.6 %)	(30.5 %)	(20.8 %)	(44.4 %)	(32.1 %)
others	1	1	1	2	0	1	6
	(4.0 %)	(2.9 %)	(2.0 %)	(3.4 %)	(0.0 %)	(1.9 %)	(2.2 %)
no access	0	0	0	0	2	1	3
	(0.0 %)	(0.0 %)	(0.0 %)	(0.0 %)	(3.8 %)	(1.9 %)	(1.1 %)
no answer	0	4	5	4	8	9	30
	(0.0 %)	(11.8 %)	(10.2 %)	(6.8 %)	(15.1 %)	(16.7 %)	(10.9 %)
Need of Agricultural Information Centre							
needed	22	27	44	57	38	46	234
	(88.0 %)	(79.4 %)	(89.8 %)	(96.6 %)	(71.7 %)	(85.2 %)	(85.4 %)
not needed	3	1	3	1	8	7	23
	(12.0 %)	(2.9 %)	(6.1 %)	(1.7 %)	(15.1 %)	(13.0 %)	(8.4 %)
no answer	0	6	2	1	7	1	17
	(0.0 %)	(17.6 %)	(4.1 %)	(1.7 %)	(13.2 %)	(1.9 %)	(6.2 %)

Table 3.3.49 Use of Rural Credit [Q.45]

Use of Rural Credit System	Nong Bua	Huai Pheung	Wiang Wai	Nong Sao	Mai Don Kaew	Pak Ing Tai	Total
	n = 25	n = 34	n = 49	n = 59	n = 53	n = 54	n = 274
using	16	15	27	29	30	38	155
	(64.0 %)	(44.1 %)	(55.1 %)	(49.2 %)	(56.6 %)	(70.4 %)	(56.6 %)
not using	5	19	20	21	23	8	96
	(20.0 %)	(55.9 %)	(40.8 %)	(35.6 %)	(43.4 %)	(14.8 %)	(35.0 %)
no answer	4	0	2	9	0	8	23
	(16.0 %)	(0.0 %)	(4.1 %)	(15.3 %)	(0.0 %)	(14.8 %)	(8.4 %)

Table 3.3.50 Source and Amount of Rural Credit* [Q.45-2]

	Nong Bua	Huai Pheung	Wiang Wai	Nong Sao	Mai Don Kaew	Pak Ing Tai	Total
	n = 16	n = 15	n = 27	n = 29	n = 30	n = 38	n = 155
Source of Credit							
rice bank	0	0	1	0	0	19	20
	(0.0 %)	(0.0 %)	(3.7 %)	(0.0 %)	(0.0 %)	(50.0 %)	(12.9 %)
BAAC	15	15	17	26	30	9	112
	(93.8 %)	(100.0 %)	(63.0 %)	(89.7 %)	(100.0 %)	(23.7 %)	(72.3 %)
saving group	0	0	3	0	0	2	5
	(0.0 %)	(0.0 %)	(11.1 %)	(0.0 %)	(0.0 %)	(5.3 %)	(3.2 %)
kinship	1	0	2	2	0	2	7
	(6.3 %)	(0.0 %)	(7.4 %)	(6.9 %)	(0.0 %)	(5.3 %)	(4.5 %)
co-operative	0	0	3	1	0	6	10
	(0.0 %)	(0.0 %)	(11.1 %)	(3.4 %)	(0.0 %)	(15.8 %)	(6.5 %)
welfare centre	0	0	1	0	0	0	1
	(0.0 %)	(0.0 %)	(3.7 %)	(0.0 %)	(0.0 %)	(0.0 %)	(0.6 %)
Amount of Credit							
below 10,000 Baht	2	4	9	7	3	6	31
	(12.5 %)	(26.7 %)	(33.3 %)	(24.1 %)	(10.0 %)	(15.8 %)	(20.0 %)
10,000 - 20,000 Baht	3	0	4	5	8	2	22
	(18.8 %)	(0.0 %)	(14.8 %)	(17.2 %)	(26.7 %)	(5.3 %)	(14.2 %)
20,000 - 50,000 Baht	2	3	10	13	6	6	40
	(12.5 %)	(20.0 %)	(37.0 %)	(44.8 %)	(20.0 %)	(15.8 %)	(25.8 %)
50,000 - 100,000 Baht	0	6	4	2	8	2	22
	(0.0 %)	(40.0 %)	(14.8 %)	(6.9 %)	(26.7 %)	(5.3 %)	(14.2 %)
over 100,000 Baht	6	2	0	2	2	0	12
	(37.5 %)	(13.3 %)	(0.0 %)	(6.9 %)	(6.7 %)	(0.0 %)	(7.7 %)
no answer	3	0	0	0	3	22	28
	(18.8 %)	(0.0 %)	(0.0 %)	(0.0 %)	(10.0 %)	(57.9 %)	(18.1 %)
average (Baht) **	85,340	74,760	41,540	37,680	54,180	34,500	50,866

* Among those who are using a rural credit system
** Among those who stated the amount

Table 3.3.51 Condition of Rural Credit* [Q.45-3**]

	Nong Bua	Huai Pheung	Wiang Wai	Nong Sao	Mai Don Kaew	Pak Ing Tai	Total
	n = 16	n = 15	n = 27	n = 29	n = 30	n = 38	n = 155
Annual Interest							
0 - 5 %	1	0	8	5	1	5	20
	(6.3 %)	(0.0 %)	(29.6 %)	(17.2 %)	(3.3 %)	(13.2 %)	(12.9 %)
5 - 10 %	3	3	2	4	1	3	16
	(18.8 %)	(20.0 %)	(7.4 %)	(13.8 %)	(3.3 %)	(7.9 %)	(10.3 %)
10 - 15 %	10	6	15	19	19	6	75
	(62.5 %)	(40.0 %)	(55.6 %)	(65.5 %)	(63.3 %)	(15.8 %)	(48.4 %)
> 15 %	0	6	0	1	2	1	10
	(0.0 %)	(40.0 %)	(0.0 %)	(3.4 %)	(6.7 %)	(2.6 %)	(6.5 %)
no answer	2	0	2	0	7	23	34
	(12.5 %)	(0.0 %)	(7.4 %)	(0.0 %)	(23.3 %)	(60.5 %)	(21.9 %)
Payment Period							
not limited	1	0	4	1	0	0	6
	(6.3 %)	(0.0 %)	(14.8 %)	(3.4 %)	(0.0 %)	(0.0 %)	(3.9 %)
less than 1 year	5	4	11	13	14	10	57
	(31.3 %)	(26.7 %)	(40.7 %)	(44.8 %)	(46.7 %)	(26.3 %)	(36.8 %)
1 - 5 year	3	3	9	10	8	6	39
	(18.8 %)	(20.0 %)	(33.3 %)	(34.5 %)	(26.7 %)	(15.8 %)	(25.2 %)
5 - 10 year	5	4	1	4	0	2	16
	(31.3 %)	(26.7 %)	(3.7 %)	(13.8 %)	(0.0 %)	(5.3 %)	(10.3 %)
more than 10 year	1	0	0	0	0	0	1
	(6.3 %)	(0.0 %)	(0.0 %)	(0.0 %)	(0.0 %)	(0.0 %)	(0.6 %)
no answer	1	4	2	1	8	20	36
	(6.3 %)	(26.7 %)	(7.4 %)	(3.4 %)	(26.7 %)	(52.6 %)	(23.2 %)

* Among those who are using a rural credit system
** Grace period is excluded as the majority of the respondents did not answer the question.

Table 3.3.52 Use of Credit [Q.45-4]

Use of Credit (multiple answer possible)	Nong Bua	Huai Pheung	Wiang Wai	Nong Sao	Mai Don Kaew	Pak Ing Tai	Total
	n = 16	n = 15	n = 27	n = 29	n = 30	n = 38	n = 155
farming	10	8	22	8	0	9	57
	(62.5 %)	(53.3 %)	(81.5 %)	(27.6 %)	(0.0 %)	(23.7 %)	(36.8 %)
livestock, aquaculture	3	1	0	1	11	1	17
	(18.8 %)	(6.7 %)	(0.0 %)	(3.4 %)	(36.7 %)	(2.6 %)	(11.0 %)
house building	0	0	1	2	8	1	12
	(0.0 %)	(0.0 %)	(3.7 %)	(6.9 %)	(26.7 %)	(2.6 %)	(7.7 %)
trading	0	1	0	0	0	4	5
	(0.0 %)	(6.7 %)	(0.0 %)	(0.0 %)	(0.0 %)	(10.5 %)	(3.2 %)
car purchase	1	3	0	0	1	1	6
	(6.3 %)	(20.0 %)	(0.0 %)	(0.0 %)	(3.3 %)	(2.6 %)	(3.9 %)
daily expenses	1	1	2	1	3	4	12
	(6.3 %)	(6.7 %)	(7.4 %)	(3.4 %)	(10.0 %)	(10.5 %)	(7.7 %)
children's education	0	2	0	0	4	0	6
	(0.0 %)	(13.3 %)	(0.0 %)	(0.0 %)	(13.3 %)	(0.0 %)	(3.9 %)
no answer	1	0	2	17	3	18	41
	(6.3 %)	(0.0 %)	(7.4 %)	(58.6 %)	(10.0 %)	(47.4 %)	(26.5 %)

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Table 3.3.53 Desire of Dry Season Farming (if water is available) [Q.46]

	Nong Bua	Huai Pheung	Wiang Wai	Nong Sao	Mai Don Kaew	Pak Ing Tai	Total
	n = 25	n = 34	n = 49	n = 59	n = 53	n = 54	n = 274
Desire of Dry Season Farming							
desired	22	29	38	55	34	36	214
	(88.0 %)	(85.3 %)	(77.6 %)	(93.2 %)	(64.2 %)	(66.7 %)	(78.1 %)
not desired	3	5	6	3	6	14	37
	(12.0 %)	(14.7 %)	(12.2 %)	(5.1 %)	(11.3 %)	(25.9 %)	(13.5 %)
no answer	0	0	5	1	13	4	23
	(0.0 %)	(0.0 %)	(10.2 %)	(1.7 %)	(24.5 %)	(7.4 %)	(8.4 %)
Reason for Dry Season Farming (multiple answer possible)							
	n = 22	n = 29	n = 38	n = 55	n = 34	n = 36	n = 214
for income	14	1	25	13	24	14	91
	(63.6 %)	(3.4 %)	(65.8 %)	(23.6 %)	(70.6 %)	(38.9 %)	(42.5 %)
for consumption	2	10	8	5	10	14	49
	(9.1 %)	(34.5 %)	(21.1 %)	(9.1 %)	(29.4 %)	(38.9 %)	(22.9 %)
to promote agriculture	6	18	5	37	0	12	78
	(27.3 %)	(62.1 %)	(13.2 %)	(67.3 %)	(0.0 %)	(33.3 %)	(36.4 %)
Type of Crops							
rice	3	3	4	2	4	4	20
	(13.6 %)	(10.3 %)	(10.5 %)	(3.6 %)	(11.8 %)	(11.1 %)	(9.3 %)
maize	2	3	3	6	8	1	23
	(9.1 %)	(10.3 %)	(7.9 %)	(10.9 %)	(23.5 %)	(2.8 %)	(10.7 %)
vegetables	15	23	28	39	20	21	146
	(68.2 %)	(79.3 %)	(73.7 %)	(70.9 %)	(58.8 %)	(58.3 %)	(68.2 %)
fruit	2	0	3	8	2	14	29
	(9.1 %)	(0.0 %)	(7.9 %)	(14.5 %)	(5.9 %)	(38.9 %)	(13.6 %)

Table 3.3.54 Need of Pumping Water for Farming [Q.47]

	Nong Bua	Huai Pheung	Wiang Wai	Nong Sao	Mai Don Kaew	Pak Ing Tai	Total
	n = 25	n = 34	n = 49	n = 59	n = 53	n = 54	n = 274
needed	18	27	30	47	31	36	189
	(72.0 %)	(79.4 %)	(61.2 %)	(79.7 %)	(9.0 %)	(66.7 %)	(69.0 %)
not needed	4	4	12	10	13	15	58
	(16.0 %)	(11.8 %)	(24.5 %)	(16.9 %)	(24.5 %)	(27.8 %)	(21.2 %)
no answer	3	3	7	2	13	3	31
	(12.0 %)	(8.8 %)	(14.3 %)	(3.4 %)	(24.5 %)	(5.6 %)	(11.3 %)

(4) People's Needs and Perception of Community Development

Table 3.3.55 Discussion about rural development projects with the community members [Q.48, 49]

	Nong Bua	Huai Pheung	Wiang Wai	Nong Sao	Mai Don Kaew	Pak Ing Tai	Total
	n = 25	n = 34	n = 49	n = 59	n = 53	n = 54	n = 274
Occasion to discuss about rural development projects							
yes	16	22	30	39	33	40	180
	(64.0 %)	(64.7 %)	(61.2 %)	(66.1 %)	(62.3 %)	(74.1 %)	(65.7 %)
no	8	10	19	20	20	14	91
	(32.0 %)	(29.4 %)	(38.8 %)	(33.9 %)	(37.7 %)	(25.9 %)	(33.2 %)
no answer	1	2	0	0	0	0	3
	(4.0 %)	(5.9 %)	(0.0 %)	(0.0 %)	(0.0 %)	(0.0 %)	(1.1 %)
Topics (multiple answer possible)	n = 16	n = 22	n = 30	n = 39	n = 33	n = 40	n = 180
lack of water / water resource	0	6	0	9	8	1	24
	(0.0 %)	(27.3 %)	(0.0 %)	(23.1 %)	(24.2 %)	(2.5 %)	(13.3 %)
tourist development	0	0	0	0	0	3	3
	(0.0 %)	(0.0 %)	(0.0 %)	(0.0 %)	(0.0 %)	(7.5 %)	(1.7 %)
politics	0	0	0	1	0	2	3
	(0.0 %)	(0.0 %)	(0.0 %)	(2.6 %)	(0.0 %)	(5.0 %)	(1.7 %)
drug addiction	0	0	0	0	2	2	4
	(0.0 %)	(0.0 %)	(0.0 %)	(0.0 %)	(6.1 %)	(5.0 %)	(2.2 %)
village development	7	8	17	12	28	8	80
	(43.8 %)	(36.4 %)	(56.7 %)	(30.8 %)	(84.8 %)	(20.0 %)	(44.4 %)
agricultural development	4	2	17	16	18	9	66
	(25.0 %)	(9.1 %)	(56.7 %)	(41.0 %)	(54.5 %)	(22.5 %)	(36.7 %)
saving	0	0	1	0	0	0	1
	(0.0 %)	(0.0 %)	(3.3 %)	(0.0 %)	(0.0 %)	(0.0 %)	(0.6 %)
no answer	5	18	0	1	8	15	47
	(31.3 %)	(81.8 %)	(0.0 %)	(2.6 %)	(24.2 %)	(37.5 %)	(26.1 %)

Table 3.3.56 Projects implemented for the past 5 years [Q.50]

Kind of Projects	Nong Bua	Huai Pheung	Wiang Wai	Nong Sao	Mai Don Kaew	Pak Ing Tai	Total
income generation	no	no	no	no	yes	yes	-
water resource development	yes	yes	yes	yes	yes	yes	-
tourist development	no	no	no	no	no	yes	-
political awareness	no	no	no	yes	no	no	-
community development (road, water supply, etc.)	yes	yes	yes	yes	no	yes	-
agriculture development	no	yes	no	yes	no	no	-
livestock	yes	no	no	yes	no	no	-
aquaculture	yes	yes	yes	yes	no	yes	-
public health	no	no	yes	no	no	no	-

Table 3.3.57 Opinion on the project planning [Q.51]

	Nong Bua	Huai Pheung	Wiang Wai	Nong Sao	Mai Don Kaew	Pak Ing Tai	Total
	n = 25	n = 34	n = 49	n = 59	n = 53	n = 54	n = 274
local people's opinion is not reflected	7 (28.0 %)	1 (2.9 %)	1 (2.0 %)	5 (8.5 %)	9 (17.0 %)	2 (3.7 %)	25 (9.1 %)
not suitable/ do not meet the need	8 (32.0 %)	25 (73.5 %)	23 (46.9 %)	23 (39.0 %)	31 (58.5 %)	11 (20.4 %)	121 (44.2 %)
others	0 (0.0 %)	0 (0.0 %)	3 (6.1 %)	2 (3.4 %)	0 (0.0 %)	4 (7.4 %)	9 (3.3 %)
no answer	10 (40.0 %)	8 (23.5 %)	22 (44.9 %)	29 (49.2 %)	13 (24.5 %)	37 (68.5 %)	119 (43.4 %)

Table 3.3.58 Opportunities of expressing opinions on the projects [Q.52]

	Nong Bua	Huai Pheung	Wiang Wai	Nong Sao	Mai Don Kaew	Pak Ing Tai	Total
	n = 25	n = 34	n = 49	n = 59	n = 53	n = 54	n = 274
yes	8 (32.0 %)	9 (26.5 %)	10 (20.4 %)	11 (18.6 %)	4 (7.5 %)	9 (16.7 %)	51 (18.6 %)
no	17 (68.0 %)	21 (61.8 %)	34 (69.4 %)	46 (78.0 %)	49 (92.5 %)	32 (59.3 %)	199 (72.6 %)
no answer	0 (0.0 %)	4 (11.8 %)	5 (10.2 %)	2 (3.4 %)	0 (0.0 %)	13 (24.1 %)	24 (8.8 %)

Table 3.3.59 Projects expected to be beneficial [Q.53]

Agriculture	Nong Bua	Huai Pheung	Wiang Wai	Nong Sao	Mai Don Kaew	Pak Ing Tai	Total
	n = 25	n = 34	n = 49	n = 59	n = 53	n = 54	n = 274
paddy cultivation	1 (4.0 %)	5 (14.7 %)	9 (18.4 %)	1 (1.7 %)	4 (7.5 %)	0 (0.0 %)	20 (7.3 %)
vegetable cultivation	2 (8.0 %)	8 (23.5 %)	9 (18.4 %)	8 (13.6 %)	11 (20.8 %)	9 (16.7 %)	47 (17.2 %)
orchard plantation	0 (0.0 %)	0 (0.0 %)	1 (2.0 %)	0 (0.0 %)	4 (7.5 %)	0 (0.0 %)	5 (1.8 %)
fishery	3 (12.0 %)	5 (14.7 %)	8 (16.3 %)	8 (13.6 %)	3 (5.7 %)	7 (13.0 %)	34 (12.4 %)
livestock	4 (16.0 %)	4 (11.8 %)	6 (12.2 %)	5 (8.5 %)	9 (17.0 %)	5 (9.3 %)	33 (12.0 %)
irrigation / water	13 (52.0 %)	28 (82.4 %)	24 (49.0 %)	52 (88.1 %)	23 (43.4 %)	24 (44.4 %)	164 (59.9 %)
secondary crops	0 (0.0 %)	0 (0.0 %)	0 (0.0 %)	0 (0.0 %)	0 (0.0 %)	10 (18.5 %)	10 (3.6 %)
others	1 (4.0 %)	0 (0.0 %)	0 (0.0 %)	4 (6.8 %)	0 (0.0 %)	3 (5.6 %)	8 (2.9 %)
no answer	2 (8.0 %)	0 (0.0 %)	6 (12.2 %)	6 (10.2 %)	0 (0.0 %)	8 (14.8 %)	22 (8.0 %)

Table 3.3.59 Projects expected to be beneficial (continued) [Q.53]

Income generation / Livelihood	Nong Bua	Huai Pheung	Wiang Wai	Nong Sao	Mai Don Kaew	Pak Ing Tai	Total
	n = 25	n = 34	n = 49	n = 59	n = 53	n = 54	n = 274
agro-industry	0	15	14	11	9	5	54
	(0.0 %)	(44.1 %)	(28.6 %)	(18.6 %)	(17.0 %)	(9.3 %)	(19.7 %)
processing	2	6	14	6	6	7	41
	(8.0 %)	(17.6 %)	(28.6 %)	(10.2 %)	(11.3 %)	(13.0 %)	(15.0 %)
motorcycle repair	4	9	16	9	2	1	41
	(16.0 %)	(26.5 %)	(32.7 %)	(15.3 %)	(3.8 %)	(1.9 %)	(15.0 %)
metal work	0	7	14	1	0	0	22
	(0.0 %)	(20.6 %)	(28.6 %)	(1.7 %)	(0.0 %)	(0.0 %)	(8.0 %)
brick laying	0	7	14	0	0	0	21
	(0.0 %)	(20.6 %)	(28.6 %)	(0.0 %)	(0.0 %)	(0.0 %)	(7.7 %)
carpentry	0	7	16	2	0	0	25
	(0.0 %)	(20.6 %)	(32.7 %)	(3.4 %)	(0.0 %)	(0.0 %)	(9.1 %)
dress making	6	19	20	3	7	3	58
	(24.0 %)	(55.9 %)	(40.8 %)	(5.1 %)	(13.2 %)	(5.6 %)	(21.2 %)
hair dressing	0	10	14	3	3	1	31
	(0.0 %)	(29.4 %)	(28.6 %)	(5.1 %)	(5.7 %)	(1.9 %)	(11.3 %)
ceramics	0	6	14	0	0	0	20
	(0.0 %)	(17.6 %)	(28.6 %)	(0.0 %)	(0.0 %)	(0.0 %)	(7.3 %)
pumping / electrics	0	9	14	1	6	0	30
	(0.0 %)	(26.5 %)	(28.6 %)	(1.7 %)	(11.3 %)	(0.0 %)	(10.9 %)
vocational training	3	5	10	16	3	15	52
	(12.0 %)	(14.7 %)	(20.4 %)	(27.1 %)	(5.7 %)	(27.8 %)	(19.0 %)
others	1	5	0	5	6	7	24
	(4.0 %)	(14.7 %)	(0.0 %)	(8.5 %)	(11.3 %)	(13.0 %)	(8.8 %)
no answer	7	0	16	14	7	21	65
	(28.0 %)	(0.0 %)	(32.7 %)	(23.7 %)	(13.2 %)	(38.9 %)	(23.7 %)

Table 3.3.59 Projects expected to be beneficial (continued) [Q.53]

	Nong Bua	Huai Pheung	Wiang Wai	Nong Sao	Mai Don Kaew	Pak Ing Tai	Total
	n = 25	n = 34	n = 49	n = 59	n = 53	n = 54	n = 274
Education							
primary school	4 (16.0 %)	2 (5.9 %)	1 (2.0 %)	0 (0.0 %)	1 (1.9 %)	0 (0.0 %)	8 (2.9 %)
secondary school	5 (20.0 %)	10 (29.4 %)	20 (40.8 %)	25 (42.4 %)	7 (13.2 %)	26 (48.1 %)	93 (33.9 %)
tertiary school	4 (16.0 %)	6 (17.6 %)	4 (8.2 %)	10 (16.9 %)	12 (22.6 %)	1 (1.9 %)	37 (13.5 %)
literacy program	6 (24.0 %)	0 (0.0 %)	3 (6.1 %)	0 (0.0 %)	18 (34.0 %)	22 (40.7 %)	49 (17.9 %)
non-formal education / vocational training	3 (12.0 %)	6 (17.6 %)	2 (4.1 %)	7 (11.9 %)	1 (1.9 %)	5 (9.3 %)	24 (8.8 %)
others	1 (4.0 %)	2 (5.9 %)	0 (0.0 %)	11 (18.6 %)	1 (1.9 %)	0 (0.0 %)	15 (5.5 %)
no answer	6 (24.0 %)	8 (23.5 %)	0 (0.0 %)	15 (25.4 %)	0 (0.0 %)	0 (0.0 %)	29 (10.6 %)
Public Health							
health centre / medical facilities and equipment	7 (28.0 %)	25 (73.5 %)	5 (10.2 %)	12 (20.3 %)	4 (7.5 %)	24 (44.4 %)	77 (28.1 %)
provision of medicine	2 (8.0 %)	10 (29.4 %)	11 (22.4 %)	7 (11.9 %)	0 (0.0 %)	10 (18.5 %)	40 (14.6 %)
medical care / mother and child health	3 (12.0 %)	14 (41.2 %)	16 (32.7 %)	22 (37.3 %)	12 (22.6 %)	2 (3.7 %)	69 (25.2 %)
sanitation	1 (4.0 %)	5 (14.7 %)	1 (2.0 %)	4 (6.8 %)	3 (5.7 %)	2 (3.7 %)	16 (5.8 %)
safe water	2 (8.0 %)	6 (17.6 %)	1 (2.0 %)	9 (15.3 %)	4 (7.5 %)	0 (0.0 %)	22 (8.0 %)
preventive medicine	0 (0.0 %)	7 (20.6 %)	4 (8.2 %)	3 (5.1 %)	6 (11.3 %)	2 (3.7 %)	22 (8.0 %)
no answer	8 (32.0 %)	4 (11.8 %)	22 (44.9 %)	21 (35.6 %)	16 (30.2 %)	22 (40.7 %)	93 (33.9 %)

Table 3.3.60 Crop diversification [Q.54]

	Nong Bua	Huai Pheung	Wiang Wai	Nong Sao	Mai Don Kaew	Pak Ing Tai	Total
	n = 25	n = 34	n = 49	n = 59	n = 53	n = 54	n = 274
Desired Type of Crops for Diversification							
orchard	4	9	28	13	7	24	85
	(16.0 %)	(26.5 %)	(57.1 %)	(22.0 %)	(13.2 %)	(44.4 %)	(31.0 %)
vegetables	23	21	43	37	30	11	165
	(92.0 %)	(61.8 %)	(87.8 %)	(62.7 %)	(56.6 %)	(20.4 %)	(60.2 %)
garlic / onion	3	13	7	9	0	0	32
	(12.0 %)	(38.2 %)	(14.3 %)	(15.3 %)	(0.0 %)	(0.0 %)	(11.7 %)
rice	2	3	3	5	6	3	22
	(8.0 %)	(8.8 %)	(6.1 %)	(8.5 %)	(11.3 %)	(5.6 %)	(8.0 %)
soy and other beans	0	7	8	0	1	5	21
	(0.0 %)	(20.6 %)	(16.3 %)	(0.0 %)	(1.9 %)	(9.3 %)	(7.7 %)
maize / cassava	0	10	4	8	1	5	28
	(0.0 %)	(29.4 %)	(8.2 %)	(13.6 %)	(1.9 %)	(9.3 %)	(10.2 %)
others	0	2	0	1	0	0	3
	(0.0 %)	(5.9 %)	(0.0 %)	(1.7 %)	(0.0 %)	(0.0 %)	(1.1 %)
no answer	4	0	8	4	8	17	41
	(16.0 %)	(0.0 %)	(16.3 %)	(6.8 %)	(15.1 %)	(31.5 %)	(15.0 %)
Reason for Selection							
income increase / good price	7	16	13	38	2	15	91
	(28.0 %)	(47.1 %)	(26.5 %)	(64.4 %)	(3.8 %)	(27.8 %)	(33.2 %)
easy to cultivate	12	10	23	2	1	16	64
	(48.0 %)	(29.4 %)	(46.9 %)	(3.4 %)	(1.9 %)	(29.6 %)	(23.4 %)
for consumption	2	0	9	14	1	1	27
	(8.0 %)	(0.0 %)	(18.4 %)	(23.7 %)	(1.9 %)	(1.9 %)	(9.9 %)
disease tolerance	0	0	0	0	0	1	1
	(0.0 %)	(0.0 %)	(0.0 %)	(0.0 %)	(0.0 %)	(1.9 %)	(0.4 %)
no answer	4	8	11	5	41	14	83
	(16.0 %)	(23.5 %)	(22.4 %)	(8.5 %)	(77.4 %)	(25.9 %)	(30.3 %)

Table 3.3.61 Future Engagement in New Business [Q.55]

	Nong Bua	Huai Pheung	Wiang Wai	Nong Sao	Mai Don Kaew	Pak Ing Tai	Total
	n = 25	n = 34	n = 49	n = 59	n = 53	n = 54	n = 274
Plan of engaging in new business							
yes	10 (40.0 %)	8 (23.5 %)	19 (38.8 %)	32 (54.2 %)	19 (35.8 %)	22 (40.7 %)	110 (40.1 %)
no	13 (52.0 %)	14 (41.2 %)	27 (55.1 %)	27 (45.8 %)	31 (58.5 %)	31 (57.4 %)	143 (52.2 %)
no answer	2 (8.0 %)	12 (35.3 %)	3 (6.1 %)	0 (0.0 %)	3 (5.7 %)	1 (1.9 %)	21 (7.7 %)
Type of Business (multiple answer possible)							
livestock	1 (4.0 %)	0 (0.0 %)	3 (6.1 %)	3 (5.1 %)	1 (1.9 %)	3 (5.6 %)	11 (4.0 %)
trading	4 (16.0 %)	5 (14.7 %)	6 (12.2 %)	16 (27.1 %)	2 (3.8 %)	5 (9.3 %)	38 (13.9 %)
processing	1 (4.0 %)	0 (0.0 %)	1 (2.0 %)	0 (0.0 %)	4 (7.5 %)	2 (3.7 %)	8 (2.9 %)
cultivation of new crops	0 (0.0 %)	4 (11.8 %)	7 (14.3 %)	5 (8.5 %)	1 (1.9 %)	1 (1.9 %)	18 (6.6 %)
others	2 (8.0 %)	5 (14.7 %)	2 (4.1 %)	4 (6.8 %)	1 (1.9 %)	2 (3.7 %)	16 (5.8 %)
no answer	2 (8.0 %)	0 (0.0 %)	0 (0.0 %)	4 (6.8 %)	10 (18.9 %)	9 (16.7 %)	25 (9.1 %)

Table 3.3.62 Kok-Ing-Nan Project [Q.56]

	Nong Bua	Huai Pheung	Wiang Wai	Nong Sao	Mai Don Kaew	Pak Ing Tai	Total
	n = 25	n = 34	n = 49	n = 59	n = 53	n = 54	n = 274
Knowledge about Kok-Ing-Nan Project							
yes	17 (68.0 %)	9 (26.5 %)	22 (44.9 %)	27 (45.8 %)	12 (22.6 %)	16 (29.6 %)	103 (37.6 %)
no	6 (24.0 %)	17 (50.0 %)	27 (55.1 %)	32 (54.2 %)	41 (77.4 %)	37 (68.5 %)	160 (58.4 %)
no answer	2 (8.0 %)	8 (23.5 %)	0 (0.0 %)	0 (0.0 %)	0 (0.0 %)	1 (1.9 %)	11 (4.0 %)
Source of Information							
from village leader / village meeting	2 (8.0 %)	0 (0.0 %)	4 (8.2 %)	5 (8.5 %)	0 (0.0 %)	1 (1.9 %)	12 (4.4 %)
TV / radio	5 (20.0 %)	0 (0.0 %)	5 (10.2 %)	4 (6.8 %)	3 (5.7 %)	4 (7.4 %)	21 (7.7 %)
newspaper	0 (0.0 %)	0 (0.0 %)	3 (6.1 %)	0 (0.0 %)	0 (0.0 %)	0 (0.0 %)	3 (1.1 %)
neighbour	1 (4.0 %)	0 (0.0 %)	6 (12.2 %)	14 (23.7 %)	6 (11.3 %)	0 (0.0 %)	27 (9.9 %)
government official / MP	3 (12.0 %)	0 (0.0 %)	4 (8.2 %)	1 (1.7 %)	1 (1.9 %)	1 (1.9 %)	10 (3.6 %)
not specify	6 (24.0 %)	9 (26.5 %)	0 (0.0 %)	3 (5.1 %)	2 (3.8 %)	10 (18.5 %)	30 (10.9 %)

Table 3.3.63 Impacts of Kok-Ing-Nan Project [Q.57]

Possible Impacts	Nong Bua	Huai Pheung	Wiang Wai	Nong Sao	Mai Don Kaew	Pak Ing Tai	Total
	n = 25	n = 34	n = 49	n = 59	n = 53	n = 54	n = 274
certainly have impacts	2	2	13	8	1	11	37
	(8.0 %)	(5.9 %)	(26.5 %)	(13.6 %)	(1.9 %)	(20.4 %)	(13.5 %)
maybe impacts	6	11	16	14	5	20	72
	(24.0 %)	(32.4 %)	(32.7 %)	(23.7 %)	(9.4 %)	(37.0 %)	(26.3 %)
no impacts	12	11	16	29	30	18	116
	(48.0 %)	(32.4 %)	(32.7 %)	(49.2 %)	(56.6 %)	(33.3 %)	(42.3 %)
no answer / do not know	5	10	4	8	17	5	49
	(20.0 %)	(29.4 %)	(8.2 %)	(13.6 %)	(32.1 %)	(9.3 %)	(17.9 %)

Table 3.3.64 Impacts of Kok-Ing-Nan Project* [Q.58]

	Nong Bua	Huai Pheung	Wiang Wai	Nong Sao	Mai Don Kaew	Pak Ing Tai	Total
	n = 8	n = 13	n = 29	n = 22	n =6	n = 31	n = 109
Positive Impacts (multiple answer possible)							
no / less flooding	3	0	2	5	1	4	15
	(37.5 %)	(0.0 %)	(6.9 %)	(22.7 %)	(16.7 %)	(12.9 %)	(13.8 %)
enough water	4	1	14	14	0	12	45
	(50.0 %)	(7.7 %)	(48.3 %)	(63.6 %)	(0.0 %)	(38.7 %)	(41.3 %)
no erosion	0	0	3	0	0	1	4
	(0.0 %)	(0.0 %)	(10.3 %)	(0.0 %)	(0.0 %)	(3.2 %)	(3.7 %)
Others	0	1	0	2	0	0	3
	(0.0 %)	(7.7 %)	(0.0 %)	(9.1 %)	(0.0 %)	(0.0 %)	(2.8 %)
Negative Impacts (multiple answer possible)							
flooding	0	0	9	1	0	10	20
	(0.0 %)	(0.0 %)	(31.0 %)	(4.5 %)	(0.0 %)	(32.3 %)	(18.3 %)
loss of land	0	4	0	1	0	6	11
	(0.0 %)	(30.8 %)	(0.0 %)	(4.5 %)	(0.0 %)	(19.4 %)	(10.1 %)
loss of forest	0	0	0	2	1	4	7
	(0.0 %)	(0.0 %)	(0.0 %)	(9.1 %)	(16.7 %)	(12.9 %)	(6.4 %)
shortage of water	0	6	0	0	1	1	8
	(0.0 %)	(46.2 %)	(0.0 %)	(0.0 %)	(16.7 %)	(3.2 %)	(7.3 %)
imbalance in ecosystem	0	0	2	0	1	2	5
	(0.0 %)	(0.0 %)	(6.9 %)	(0.0 %)	(16.7 %)	(6.5 %)	(4.6 %)
soil erosion	0	4	0	0	0	1	5
	(0.0 %)	(30.8 %)	(0.0 %)	(0.0 %)	(0.0 %)	(3.2 %)	(4.6 %)
No answer	1	0	0	0	2	0	3
	(12.5 %)	(0.0 %)	(0.0 %)	(0.0 %)	(33.3 %)	(0.0 %)	(2.8 %)

* Among the respondents who stated "surely" or "maybe" have impacts.

4. PEOPLE'S IRRIGATION SYSTEM

4   PEOPLE'S IRRIGATION SYSTEM

4.1   Inventory Survey Form

PIS: Inventory Survey

Ref. No.   _____
Survey Date _____

1) Name of PIS   _____

2) Location: Province _____
                  District _____
                  Sub-district _____
                  Village(s) _____
                  _____

3) PIS Group   Number of households in the group _____,
                  which is _____% of households in the area.

4) Source of water:
     Name of river / stream _____
     Weir   Dimension _____ X _____ X _____, (_____m3)
             Type _____
             Material _____
             The year of construction and reconstruction, agency involved, etc.

             _____
             _____
             _____

     Canal   Number of canals _____
             Length, No. of Farm Turnout, Type, Material, etc. of each canal

             _____
             _____
             _____
             _____

     Ditches   _____

                _____

     Duration of water use   From _____(month) to _____(month)

5) History of the Group (start as a group, changes, government involvement, etc.)

     _____
     _____
     _____
     _____
     _____
     _____
     _____
     _____

6) Water Supply Area

Seasons	Crop	Area (rai)	Yield (kg/rai)
Rainy Season			
		Total rai	-
Dry Season			
		Total rai	-

What are the reasons for less farming in the dry season?

1)_____ 2)_____

_____ 3)_____

_____4)_____

_____

What are the income sources of the farmers in the dry season?

1)_____ 2)_____

_____ 3)_____

_____4)_____

_____

7) Main Problems

- O   Lack of water in the dry season
- O   Lack of water even in the rainy season
- O   Flooding from the water source
- O   Damage of the weir: (reason) _____
- O   Damage of the canal: (reason) _____
- O   Damage of ditches: (reason) _____
- O   Dispute over water distribution among members
- O   Competitive water use during the peak period
- O   Theft of irrigation water: (reason) _____~_____
- O   Others: (specify) _____

8) Organisation   Number of committee members   _____

     O   Kae Fai   (weir chief)
     O   Kae Muang (canal chief)
     O   Phunchai Kae Muang (deputy canal chief)
     O   Liab Nam (field checker)
     O   Lam Nam (water messenger)
     O   Others: _____

Selection of chiefs and committee members

_____
_____
_____
_____

Committee meetings _____ times/year
Main topics at the meeting

_____
_____
_____
_____

All-member meetings _____ times/year
Main topics at the meeting

_____
_____
_____
_____

Member Responsibility
     Water Fee _____ Baht/rai/year
         O Paid by all O Paid by _____% O No fee
     Payment in kind / labour _____

_____

Penalty _____

_____

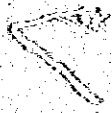Repair of the weir and canal _____

_____

Cleaning of the weir, canal and ditches _____

_____
_____

9) Sketch of the water source, the weir, canals, ditches, fields, etc.

1 0) Diagram of the PI group management structure.

1 1) Any other remarks.

5. FISHERIES, AQUATIC ECOLOGY & FRESHWATER BIODIVERSITY

5   FISHERIES, AQUATIC ECOLOGY & FRESHWATER BIODIVERSITY

5.1   Questionnaire Formats

No................................

Seasonal migration of fish species found in the Mekong River to the Ing, Kok, & Lao Rivers, and other natural fishery resources in Chiang Rai

1.   Ban...........Moo..........Tambon......... Amphoe................ Changwat Chiang Rai
      (Village)   (Group)   (Sub-district)   (District)   (Province)

      ° Natural source for fishery, specify..........................River
      ° Natural source for fishery is in the conservation zone
      ° Natural source for fishery is in between the River and the conservation zone

2.   Fishery Purpose ° As main occupation
                      ° As a supplementary occupation
                      ° For domestic consumption
                      ° Others, specify...............................

3.   Types of fish caught that are also found in the Mekong River and the Mekong fish species;
      3.1 Greater Black Shark   ° Very abundant ° Abundant   ° Rare
          (Pla Ka or Pla Plei)
      3.2 Jullien's Mud Carp   ° Very abundant ° Abundant   ° Rare
          (Pla Sroi Khaw)
      3.3 Yellow Mystus   ° Very abundant ° Abundant   ° Rare
          (Pla Kod Luang)
      3.4 Others, specify........   ° Very abundant ° Abundant   ° Rare

4.   Time for fishing, fishing method, total weight of fish caught, selling price, fisherman's income
      4.1 Time for fishing = ...hours/day, Fishing method = ...
      4.2 Average total weight of fish caught (only fish found as well in the Mekong River and
          the Mekong fish species) about....................kg/day
      4.3 Average selling price about.............Baht/kg, so the fisherman can gain
          about.................Baht/day (in case of main occupation)

5.   Abundance of fish which are also found in the Mekong River and the Mekong fish species
      in the fishery resources during a year
      5.1 July   ° Very abundant ° Abundant   ° Rare
      5.2 August   ° Very abundant ° Abundant   ° Rare
      5.3 September   ° Very abundant ° Abundant   ° Rare
      5.4 October   ° Very abundant ° Abundant   ° Rare
      5.5 Others   ° Very abundant ° Abundant   ° Rare

The Potential of Aquaculture in the Kok and Ing Basins and along the Kok and Ing Rivers

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1. Ban............Moo......... Tambon......... Amphoe................. Changwat Chiang Rai
    (Village)   (Group)   (Sub-district)   (District)   (Province)
    (☐ Kok Basin   ☐ Ing Basin)

2. Number of group members = ...
    Average area for aquaculture = ... rai/farm
    The aquaculture is operated as
    ☐ Main Occupation   ☐ Supplementary Occupation

3. Fish species for aquaculture are...
    With a fish production of...............................kg/rai, it can generate a total income
    of............................. Baht/year/household

4. Problems for aquaculture
4.1 Fry (please specify)..
4.2 Aquaculture technique (please specify)...
4.3 Money for investment (please specify)...
4.4 Water Quality (please specify)..
4.5 Others (please specify)...

5. Have you heard that culture of the Mekong Giant Catfish has now succeeded?
    ☐ Yes   ☐ No

6. If there is a fund established by money collecting from the beneficiaries in the Chao Phaya Delta accordingly to the Kok-Ing-Nan Water Diversion Project, and providing the farmers a loan with low profit, ...

6.1 Which agency do you think would be an effective agency to operate the fund?
    ☐ Agricultural Co-operatives Bank
    ☐ Department of Fisheries
    ☐ Co-operative group
    ☐ Others (please specify) ....

6.2 Would you be interested in culture of the Mekong Giant Catfish and other species, if promoted?
    Mekong Giant Catfish   ☐ Very interested   ☐ Interested   ☐ Not quite interested
    Other species ....   ☐ Very interested   ☐ Interested   ☐ Not quite interested

6.3 Do you expect to have your aquaculture farm expanded from currently .... rai to ....
    rai, in case receiving a loan of Baht.

5.2 Fish Species

Table 5.1 Fish Species in Kok & Ing Basin and Chao Phraya Basin.
(X = species found)

Scientific Name	Local name	Kwan Phayao					Nong Leng Sai		Nam Ing		Chao Phraya
		1969	1971	1973	1982	1992	1982	1992	1995	1996	1980, 1976
Family Notopteridae											
Notopterus chitala (Ham.)	Krai	X	X	-	X	X	-	X	-	-	X
Notopterus notopterus (Pallas)	Salad	X	X	X	X	X	X	X	X	-	X
Family Cyprinidae											
Paralaubuca stigmabrachium (Fowler)	Pab	-	-	-	X	-	-	-	-	-	-
Esomus metallicus Ahl.	Sui Nwod Yaw	X	X	-	X	X	X	-	-	X	X
Luciosoma bleekeri Steindachner	Sui Ao	X	X	-	X	X	-	-	-	-	X
Rasbora borapetensis Smith	Sui Hang Dang	X	X	-	X	-	X	-	X	-	-
Rasbora dusonensis Bleeker	Sui Kwai	-	-	-	X	-	-	-	X	-	-
Rasbora argyrotaenia	Sui Kwai Kang Ngan	X	X	-	-	-	-	-	-	-	X
Mystacoleucus marginatus (Cuo & Val)	Khi Yok	-	-	-	X	-	-	-	-	X	-
Hampala macrolepidota Van Hasselt	Sik or Sapak	X	X	-	X	X	-	X	-	-	X
Hampala dispar Smith	Sik or Sapak	X	X	X	X	X	-	-	X	-	X
Cyclocheilichthys repasson (Bleeker)	Pap	-	-	-	X	-	X	-	-	-	-
Cirrhinus jullieni Sauvage	Soi Khao	-	-	-	X	X	X	X	X	X	X
Puntius gonionotus (Bleeker)	Peek	X	X	-	X	X	-	X	X	-	X
Puntius leiacanthus (Bleeker)	Tapien Sai	-	X	-	X	X	X	X	-	-	X
Hypophthahnichthy molitrire	Leng	-	-	-	X	-	-	-	-	-	-
Cyclocheilichthys coolidgei	Ta Dang	X	X	-	-	-	-	-	-	-	-
Cyclocheilichthys armatus	Pak lium	-	-	-	-	-	-	-	-	X	-
Rasbora palustris	Sui	-	-	-	-	-	-	-	-	X	X
Puntius orphoides (Cuv. & Val.)	Pok Som	X	X	-	X	-	X	-	-	-	-
Puntius schwanenfeldi (Bleeker)	Peek Hang Dang	X	X	-	X	-	-	-	-	-	X
Thynnichthys thynnoides (Bleeker)	Sai Kfed Tee	X	X	-	X	-	-	-	-	-	X
Oxygaster siamensis	Pab	X	X	-	-	-	-	-	-	-	X
Laoeo rohita (Ham.)	Yee Sok Thad	-	-	-	X	X	-	-	-	-	X
Labeo frenatus Fowler	Soi Lord	-	-	-	X	-	-	-	-	-	-
Epalzeorhynchos frenatus H.M.Smith	Soi	-	-	-	-	X	-	X	-	-	X
Cyprinus carpio	Tapien	X	X	-	X	X	-	X	-	-	X
Mystaeoleucus chiloptenis	Khee Yok	X	X	-	-	-	-	X	-	-	-
Osteochilus hasselti (Cuv. & Val.)	Soi Nok Kao	X	X	-	X	-	-	-	X	-	-
Osteochilus vittatus (Cuv. & Val.)	Rong Mai Tab	X	X	-	X	-	-	-	-	X	-

Scientific Name	Local name	Kwan Phayao					Nong Leng Sai		Nam Ing		Chao Phraya
		1969	1971	1973	1982	1992	1982	1992	1995	1996	1980, 1976
Labiobarbus sumatranus (Bleeker)	Kuk Leain	X	X	-	X	-	-	-	-	-	-
Labiobarbus lineatus (Sauvage)	Sar	-	-	-	X	-	-	-	-	X	-
Amblyrhynchichthys truncatus (Bleeker)	Nam Lang	X	X	-	X	-	-	-	-	-	X
Morulius chrysophekadion (Bleeker)	Pia or Ka	X	X	-	X	-	-	-	X	-	X
Epalgeorphynchos siamensis Smith	Lab Mue Nang	X	X	X	X	-	-	-	-	-	-
Epalgeorphynchos coustisi Fowler	-	X	X	-	X	-	-	-	-	-	-
Labeo erythrurus	Gar Dang	-	-	-	-	-	-	-	-	X	X
Cobitophis anquillaris	Ard	-	-	-	-	-	-	-	-	X	-
Epalgeorphynchos stigmacus	Soi	X	X	-	X	-	-	-	-	-	-
Family Cobitidae											
Botia hymenophysa (Bleeker)	Mu Lai	X	X	-	X	-	-	-	-	X	X
Botia lucas-bahi Fowler	Mu	X	X	-	X	-	-	-	-	-	-
Lepidocyshalus octocirrhus	Kor	-	-	-	X	-	-	-	-	-	-
Acanthopsis choirorphynchos (Bleeker)	Rak Kluay	-	-	-	X	-	-	-	-	X	-
Acanthophthalmus kuhli (Cuv. & Val.)	Ee Loi	X	X	-	X	-	-	-	-	-	X
Noemacheilus sp.	Ko	-	-	-	X	-	-	-	-	-	-
Family Siluridae											
Wallago attu (Bloch)	Kao	X	X	-	X	-	-	-	-	-	X
Family Bagridae											
Mystus cavasius (Ham.)	Kod	X	X	X	X	-	-	X	-	X	X
Mystus nemurus (Cuv. & Val.)	Kod	X	X	-	X	X	-	-	X	X	X
Family Pangasiidae											
Pangasius sutchi Fowler	Sawai	-	-	-	X	-	-	-	-	-	X
Platytroupius sp.	Sawai	-	-	-	-	X	-	-	-	-	X
Family Clariidae											
Clarias batrachus (Linn.)	Duk Dan	X	X	-	X	X	X	-	-	-	X
Clarias macroaphalus Gumther	Duk Oui	X	X	-	X	X	X	-	X	-	X
Family Anabantidae											
Anabas testudineus (Bloch)	Mo	X	X	-	X	X	-	X	-	-	X
Helostoma temmincki (Cuv. & Val.)	Mo Tan	X	X	-	X	-	-	-	-	-	X
Trichopsis vittatus (Cuv. & Val.)	Krim	-	-	-	X	X	X	-	-	-	X
Trichogaster pectoralis (Regon)	Salid	X	X	-	X	-	X	X	-	-	X
Trichogaster trichopterus (Pallas)	Salarg	X	X	-	X	X	X	X	X	-	X
Osphronemus goramy	Mo Tan	X	X	-	-	-	-	-	-	-	X
Betta splendens	Kad	X	X	-	-	X	-	-	-	-	X
Family Channidae											
Channa striatus Bloch	Chon	-	-	-	X	-	X	-	-	-	X
Family Symbranchidae											
Monopterus albus Ziew	Lai	-	-	-	X	-	X	-	-	-	-

Scientific Name	Local name	Kwan Phayao					Nong Leng Sai		Nam Ing		Chao Phraya
		1969	1971	1973	1982	1992	1982	1992	1995	1996	1980, 1976
Family Centropomidae											
Chanda siamensis (Fowler)	Wan Kwao	•	-	-	X	-	X	-	-	-	X
Family Nandidae											
Pristolepis fasciatus (Bleeker)	Mo Chang Yeab	X	X	X	X	-	X	X	X	-	X
Pristolepis jasciatus	Mo	-	-	-	-	X	-	-	-	-	-
Family Mastacembilidae											
Macrognathus aculeatus (Bloch)	Lod	X	X	-	X	-	-	X	-	-	X
Mastacembebes armatus Gunther	Kathing	X	X	-	X	X	-	-	X	-	X
Family Belonidae											
Dermogenys pusillus	Kham	X	X	X	X	X	X	X	X	X	X
Family Tetraodontidae											
Tetraodon leiurus Bleeker	Pak Pao	X	X	-	X	-	-	-	-	-	X
Family Cichlidae											
Tilapia melanopleura Dumeril	Mo Thed	X	X	X	X	-	-	-	-	-	-
Tilapia mossabica (Peters)	Kang Lai Mo Thed	X	X	-	X	X	-	-	-	-	X
Tilapia nilotica (Linn.)		X	X	X	X	X	X	X	-	-	X
Family Flutidae											
Fluta alba (Zuiew)	Lai Na	X	X	-	-	-	-	X	-	-	X
Family Eleotridae											
Oxyeleotris marmoratus (Bleeker)		-	-	-	-	-	-	X	X	-	X