

CHAPTER ONE

BASELINE SURVEYS

PART I. INTRODUCTION

1. PURPOSE. Analysis of a baseline survey is a very complex undertaking that cannot be reduced to a few specific steps. To attempt to provide a complete written document on how to prepare and analyze the data for the CARE project in Mae Chaem would require more time than preparation of the baseline report itself. The document on how to conduct the baseline analysis, if it were to cover the multitude of individual contingencies that could occur would run to several volumes.

Rather than attempting to be encyclopedic, a number of specific areas and issues related to baseline survey preparation have been selected which are particularly relevant to the CARE project. This paper is not a manual for completion of the analysis but rather is intended to provide a measure of guidance and council and to help the project staff avoid as many pitfalls as possible.

A very important aspect of baseline data analysis and preparation that is not covered in this paper at all refers to the use of computers to prepare the baseline analysis. The technical details on computer operations are very complex, as

evidenced by the size of any computer manual. It is much easier and more efficient to impart specific knowledge on the use of computers for baseline surveys when both teacher and pupil are sitting at a machine working with real data.

PART II. BEGIN AT THE END

1. IDENTIFY KEY QUESTIONS. The first step in conducting a baseline survey is to begin at the end rather than to begin at the beginning. The ultimate goal of a baseline survey is to provide answers to specific questions. Thus, the first step in preparing the survey is to identify all key questions for which answers are desired.

An example of a key question could be, "do the villages in the project area produce enough food for their own consumption?"

2. "DUMMY" TABLES. Most baseline survey reports are composed primarily of tables of data. Again, working backwards, the next step in preparation of the baseline survey after the key questions have been identified is to prepare baseline table shells which will display the answers to the questions. Obviously, if the survey has not yet been conducted, it is not possible to include data in the tables at this point. However, it IS possible to prepare a "dummy" table, that is, a table which includes the title of the table as well as the categories of data along the left margin, the "stub," and along the top of the table, the "banner."

Continuing with the sample question of food sufficiency, it would probably be desirable to obtain data on rice production as one measure of food sufficiency. A "dummy" table which would display information on rice production might be prepared as follows:

Table 1. AVERAGE QUANTITY OF RICE PRODUCED PER PERSON

VILLAGE	MEAN (KG/PERSON)	VILLAGE TOTAL
Village 1		
Village 2		
Overall		

It may seem unnecessary to actually draw up tables like this, but in practice it helps to clarify issues and point out data items which may have been overlooked. It also helps avoid misunderstanding among persons involved in the preparation of the survey as each person has the same piece of paper in front of them.

3. FINALLY, THE BEGINNING: QUESTIONNAIRES. Once all the "dummy" tables have been prepared, then and only then is it time to begin to think about specific questions to be employed to obtain the desired data, i.e., to design the survey instrument or questionnaire.

PART III. SOURCES OF INFORMATION

1. INFORMATION (DATA) IS NOT FREE. Gathering data uses the time of both the gathering organization and the respondent. It also costs money, both in terms of the time of the people involved as well as the costs of transportation, computer data entry, evaluation, etc. Thus there is always a trade-off between the ideal information that an organization such as CARE would like to have and the amount of information the organization can reasonably afford to acquire.

2. SOURCES OF INFORMATION. One of the key factors affecting the cost of information - and the quality and quantity of that information - is the information source. In an area development project, there are four major types of data sources. Each has a different cost to obtain and each has a different quality and/or quantity associated with it. These four types of data are described below.

(1) VILLAGER REPORTED DATA. This is information given to an enumerator, usually during the course of a questionnaire survey. An example of information from this data source is the answer to the question, "how much rice did you produce last year?"

Information from this source is relatively inexpensive, although it does require a number of trained enumerators working over a period of time. Thus it also results in a cost for transporting enumerators from village to village.

Data from this source can have a reliability problem as respondents may remember information incorrectly or may purposely provide erroneous information. The enumerator must be able to make a value judgment of the "reasonableness" of the information reported. For example, if a farmer reported a total yield of 50,000 kilograms of rice, the enumerator should know enough to check into this answer more fully.

This reliability problem caused by honest errors on the part of respondents, however, may be mitigated by the number of persons answering each question. Even if there are errors in individual responses, when these data are averaged, the errors may largely cancel each other out. Of course, obviously erroneous responses, such as the 50,000 kg of rice above, can and should be eliminated from the evaluation of the data.

(2) HEADMAN REPORTED DATA. This source of data is much less expensive than the villager reported data. A single enumerator on a motorcycle can interview many village headmen in a short period of time.

It would be expected that the headman would be the most knowledgeable individual in the village, thus his information would be probably the most reliable of any single individual. However, he is still a single individual and subject to the same type of lapses of memory and biases as any individual villager. For example, the headman may feel that by under-reporting average rice yields, his village may get higher levels of project support

than being graduated).

(3) ENUMERATOR COUNTED DATA. This data source probably provides among the most reliable data available, but it is also the most costly to obtain as it requires the greatest amount of enumerator man-days. For example, rather accurate measures of rice yields can be obtained by having enumerators harvest and measure yields of rice from marked 5 x 5 meter squares in many farmers' fields.

(4) ENUMERATOR EVALUATED DATA. For village level data, using this source costs about the same as headman reported data. If data is collected on individual households, the cost should be about the same as villager reported data. Its accuracy depends on the technical experience and professional judgment of the enumerator. If the enumerator is suitably qualified, this method can be very cost-effective although for some types of data it could be argued that the village headman would be more knowledgeable of the situation in his own village.

3. WHICH SOURCE IS BEST? Normally, an area development project will use a combination of all four types of data sources. Project managers would use professional judgment to decide which sources are most appropriate for which data items.

In completing the baseline survey analysis of data gathered on the CARE project, it is important to specify in the report the source of each data item and the implications for the validity and reliability of that data.

PART IV. THE QUESTIONNAIRE MANUAL

1. WHY A MANUAL? When a questionnaire is prepared, it should have an accompanying manual to define the exact nature of the data desired for each question. Among the key features needed in the manual are specific instructions on how to record an answer of "0" and how to record a case where the respondent refused to answer a given question. Failure to carefully describe how to record each response can result in otherwise useful data having to be discarded. Virtually NO question is too simple that it need not have an explanation in the questionnaire manual. The lack of such a manual is the main weakness identified in the CARE baseline survey. A few examples of problems from the CARE questionnaire:

(1) Several questions ask how long an individual has used a field. Unfortunately, many questionnaires record "0" years of use although the same farmer reports that he did in fact use the field during the current year. A manual for the questionnaire would have clearly stated that the current year is to be counted as "1".

(2) Some households have more than one field of a given type. However, the questionnaire provides space for recording only one field. A manual would have advised that each field be recorded separately. .PA

2. IT'S NOT TOO LATE. Although the CARE survey has been completed, a manual for the questionnaire should be prepared to

resolve interpretation and analysis of the various data items. To do this, it will probably be necessary for the enumerators who gathered the data to explain how they personally interpreted and coded questions.

PART V. DISPLAYING DATA

1. TABLES. The most common way to display baseline data is in the form of tables. If desired, these tables can be displayed in graphs, but it is usually desirable to also include the basic data on which the graphs are based, in order to facilitate later data analysis.

2. TYPES OF ANALYSIS TABLES. There are a number of different ways the same numerical information can be analyzed and presented in tables. It is often appropriate to analyze and display the information in more than one way in a baseline survey report, as each table has its own specific meaning. Displaying information in more than one way can benefit persons using the baseline information. It is generally NOT necessary to use all, or even most, of these analysis methods for any single data element. Which are appropriate for a given data item must be left to the judgment of the person preparing the analysis.

Among the most common ways of displaying the same numerical information in tabular form are the following. For expositional

purposes, the data item "COFFEE TREES" has been chosen as the data item of interest.

- (1) The number of persons in each village who have coffee trees.
- (2) The total number of persons in the project area who have coffee trees.
- (3) The percent of persons in each village who have coffee trees.
- (4) The percent of persons in the project area who have coffee trees.
- (5) The average number of coffee trees per household in each village.
- (6) The average number of coffee trees per household in the project area.
- (7) The average number of coffee trees per person in each village.
- (8) The average number of coffee trees per person in the project area.
- (9) The average number of households with coffee trees in each village.
- (10) The average number of households with coffee trees in the entire project area.
- (11) A grouping of the number of coffee trees per household (e.g., group 1: no trees; group 2: 1 to 100 trees, group 3: 101 to 400 trees; group 4: over 400 trees).

There are also numerous other methods of displaying the

inter-relationship between this data and other information, e.g., number of coffee trees by income level of the respondent; number of coffee trees by dependency ratio of the household; etc.

In preparing for a baseline survey, decisions would normally be made before the questionnaire is prepared regarding how each data item would be displayed, i.e., what tables would be produced. In the case of the CARE project in Mae Chaem, these decisions had to be made after the data had been obtained.

PART VI. THE CARE QUESTIONNAIRE

The above sections give a general description of how a baseline survey is created and what it should contain. This section is intended to be a point by point review of the CARE baseline questionnaire. Specific recommendations are made for selected household questionnaire items. It is not possible to review in detail every data item from every questionnaire, but rather the following should be considered a representative sample. Each variable is represented with an "n" followed by a number indicating the number of the question in the questionnaire. Where a question has multiple parts, each part is numbered from left to right with, e.g., _1, _2, etc., as in n3_1.

THE HOUSEHOLD SURVEY QUESTIONNAIRE

Questionnaire Page 1

- n1 Name of household head
- n2 Number of household members
- n3_1 Upland rice variety planted
- = Interpretation of this data item is difficult due to differences in regional and ethnic names for varieties.
- n3_2 Amount of upland rice planted (thang)
- n3_3 Area planted to upland rice
- = This item, and all others referring to areas planted should be interpreted with care. Villagers are often unable to accurately indicate the amount of land they cultivate.
- n3_4 Upland rice yields (thang)
- n3_5 Second crop planted in upland field
- n4_1 Paddy rice variety planted
- n4_2 Amount of paddy rice planted (thang)
- n4_3 Area planted to paddy rice
- n4_4 Paddy rice yields (thang)
- n4_5 Second crop planted in paddy field
- n5 Total rice yield
- n6 Months have enough rice to eat
- = This question is affected by the time of year the survey was made. Right after harvest, estimates of how long the rice will last may differ markedly from estimates three or four months before harvest. Also, farmers may grow a small amount of early rice, which they would likely not include in estimating how long the main rice crop will last.
- n7 Annual rice needs (thang)
- = This item would be most meaningful on a per person as well as on a per household basis due to widely differing household sizes.

n8 Amount of family labor available

= Here two data items can be joined: dividing the total family size by the amount of family labor available gives the dependency ratio - the number of persons each working adult must feed. To compute this on a village basis, divide the total number of family members by the total number of workers in each village.

Questionnaire Page 2

n9_1 Total upland area owned

n9_2 Total paddy area owned

n10_1 Total upland area fallowed this year

n10_2 Total paddy area fallowed this year

n11_1 Area planted to upland rice only

n11_2 Years upland rice only field used

= These data items regarding years a field was used need to be reviewed by CARE enumerators. What was done if the farmer had more than one upland rice field? There appears to be no provision for this in the questionnaire.

n11_3 Area planted to paddy rice only

n11_4 Years paddy rice only field used

n11_5 Area planted to upland rice and other crop

= Questions regarding what crops are planted with what other crops are best done on a field by field basis as some farmers may have more than one field or may plant several crops. It should be possible to interpret this data if enumerators can explain exactly how they asked and recorded these questions.

n11_6 Years upland rice and other crop field used

n11_7 Area planted to other crop in upland rice field

n11_8 Area planted to paddy rice and other crop

n11_9 Years paddy rice and other crop field used

n11_10 Area planted to other crop in paddy field

n11_11 Type of other crop planted

n11_12 Area planted to other crop only

n11_13 Years field planted to other crop only

Questionnaire Page 3

- n14_1 Crop planted; still use traditional method
= The meaning of this data item is not clear.
- n15 Conservation method used
- n16_1 New upland cultivated area this year (rai)
- n16_2 Crop planted on new upland area
- n16_3 New paddy area cultivated this year (rai)
- n16_4 Crop planted on new upland area
- n17_1 Plant living fence
- n17_2 Plant living windbreak
- n17_3 Plant trees for shade

Questionnaire Page 4

- = The very detailed information on this page would better have been gathered as a separate survey. To answer this page of questions would be very time consuming and boring for the respondent and the enumerator, with consequent deleterious affects on the quality of the data. Farmers would probably tend to answer quickly and with little thought just to get the process over. Also, there does not appear to be any way to indicate that a crop was not planted which makes missing data difficult to interpret.

Questionnaire Pages 5, 6

- = This information is not generally considered baseline data but rather data specific to individual activities. The same comments as above pertain regarding the length of time required to answer the questions and the lack of a specific indication of what missing data means.

Questionnaire Page 7

n35_1 Elephants raised

= Here, both number of animals per household and number per person are useful. However, in the case of young animals, particularly pigs and chickens, the data may be misleading as a very young animal would be counted the same as a mature animal.

n35_2 Buffalo raised

n35_3 Cattle raised

n35_4 Pigs raised

n35_5 Ducks raised

n35_6 Chickens raised

n36_1 Male laborers/hh

n36_2 Days per male laborer per year

n26_3 Male labor wage

n36_4 Female laborers/hh

n36_5 Days per female laborer per year

n36_6 Female labor wage

n36_7 Annual HH wage labor income

n37_1 Product sold from forest

n37_2 Annual income from forest products

n38_1 Annual income from sale of livestock

n38_2 Annual income from ? labor

= It was unclear exactly what this data item is.

n38_3 Annual income from sale of crops

n38_4 [apparent duplicate] Annual income from sale of forest products

n38_5 Annual income from other sources

n39 Total annual income

Questionnaire Page 8

- n41_1 Annual expenses for rice
- n41_2 Annual expenses for other food
- n41_3 Annual expenses for housing
- n41_4 Annual medical expenses
- n41-5 Annual clothing expenses
- N41_6 Annual agricultural expenses
- n41_7 Annual education expenses
- n41_8 Other expenses
- n42 Total annual expenses
- n43 Debts
- n44 Labor costs for crop production
- n45 Number of mosquito nets per household

PART VII. SAMPLE BASELINE TABLES

To aid in the preparation of the final baseline report, a number of selected tables have been prepared. These tables reflect a variety of methods of displaying baseline data, e.g., in individual crosstabulations, in joint crosstabulations and in tables of means.

These tables are only a sample of the tables which could be prepared from available baseline data, and they have been created without benefit of a baseline questionnaire manual and without in-depth knowledge of the situation in the project area. They should, therefore, be used as samples of table structure rather than as a source of definitive data on the CARE Mae Chaem project.

PAYAP UNIVERSITY

Table 1. AVERAGE TOTAL AGRICULTURAL AREA OWNED BY TYPE

n = The number of households which own upland/paddy land and who were willing and able to estimate the amount of land they owned.

MEAN = The average area in rai of upland/paddy land owned by each household.

VILLAGE TOTAL = the total area in rai of upland/paddy land owned by all households in the village who both (1) had land and (2) were willing and able to respond to this survey question.

INTERPRETATION:

Land "owned" by villagers in most cases has never been measured, so the indicated areas are rough estimates. In addition, villagers may have other reasons for intentionally over- or under-estimating their land holdings. THESE CAVEATS APPLY TO ALL TABLES WHICH INCLUDE ESTIMATES OF AREA AND/OR CROP PRODUCTION. These data should be considered to be working approximations.

Table 1. AVERAGE TOTAL AGRICULTURAL AREA OWNED BY TYPE

Units: Rai

	UPLAND AREA			PADDY AREA		
	n	MEAN	VILLAGE TOTAL	n	MEAN	VILLAGE TOTAL
MAE LAEK	17	52.2	888	8	12.5	100
BAN KLANG+PHA KHAO	13	46.2	600	5	12.8	64
SAM SON BON	12	40.8	489	9	12.1	109
PA KLUAI	19	63.4	1204	9	10.9	98
YANG SAN LANG+YANG SAN BON	47	53.6	2519	24	19.1	459
OM LAN NOK	13	43.8	569	10	28.5	295
OM SOON KLANG	8	292.5	2340	4	12.0	48
KONG LA	28	70.4	1970	13	23.5	305
DIN KHAO	16	401.5	6424	5	12.0	60
HUAI SAI	13	39.5	514	3	26.7	80
TOTAL	186	94.2	17517	90	17.9	1608

SOURCE: N9_1

SOURCE: N9_2

Table 2. AVERAGE TOTAL UPLAND AND PADDY AREA IN PRODUCTION

n = The number of households which cultivated upland/paddy land during the year the survey was conducted and who were willing and able to estimate the amount of land they cultivated.

MEAN = The average amount of upland/paddy cultivated per household. This total is calculated by subtracting fallowed land from total land owned.

VILLAGE TOTAL = The total amount of upland/paddy cultivated by all households in the village.

INTERPRETATION:

These data showing the approximate total area cultivated indicate the degree of land scarcity, degree of reliance on agriculture, and relative share of upland and paddy land. As these data were computed from two other estimates of land area, they should be considered as very rough estimates. A direct question in the survey regarding total cultivated area would have been desirable.

Table 2. AVERAGE TOTAL UPLAND AND PADDY AREA IN PRODUCTION

Units: Rai

	UPLAND PLANTED			PADDY PLANTED		
	n	MEAN	VILLAGE TOTAL	n	MEAN	VILLAGE TOTAL
MAE LAEK	17	24.4	414	8	12.5	100
BAN KLANG+PHA KHAO	11	12.7	140	5	12.8	64
SAM SON BON	12	10.4	125	9	12.1	109
PA KLUAI	18	29.7	534	9	10.9	98
YANG SAN LANG+YANG SAN BON	41	35.1	1438	24	19.1	459
OM LAN NOK	12	19.2	230	8	27.0	216
OM SOON KLANG	8	51.0	408	4	12.0	48
KONG LA	25	32.4	811	12	20.8	249
DIN KHAO	16	46.6	746	5	12.0	60
HUAI SAI	12	30.0	360	3	26.7	80
TOTAL	172	30.3	5206	87	17.0	1483

SOURCE: N9_1 - N10_1

SOURCE: N9_2 - N10_2

Table 3. AVERAGE TOTAL AREA FALLOWED BY LAND TYPE

n = The total number of household following all or part of their upland/paddy fields.

MEAN = The average upland/paddy area fallowed per household.

VILLAGE TOTAL = The total area fallowed by the entire village.

INTERPRETATION:

IN THIS TABLE AND ALL SUBSEQUENT TABLES, BLANKS IN THE DATA COLUMNS INDICATE THAT NO HOUSEHOLD IN THE VILLAGE ENGAGED IN THE ACTIVITY. For example, no paddy land was fallowed in Mae Laek village.

As paddy land is normally very productive, it would be interesting to determine why any paddy land was fallowed.

Higher per household fallowed area indicates lower land pressure. In villages with much fallowed land, interest in permanent settled agriculture may be lower than in other villages.

Table 3. AVERAGE TOTAL AREA FALLOWED BY LAND TYPE

Units: Rai

	UPLAND FALLOWED			PADDY FALLOWED		
	n	MEAN	VILLAGE TOTAL	n	MEAN	VILLAGE TOTAL
MAE LAEK	15	31.6	474			
BAN KLANG+PHA KHAO	11	42.9	472			
SAM SON BON	9	40.4	364			
PA KLUAI	18	37.9	682			
YANG SAN LANG+YANG SAN BON	27	41.8	1129			
OM LAN NOK	11	30.8	339	3	23.0	69
OM SOON KLANG	8	241.5	1932			
KONG LA	21	56.6	1189	3	18.7	56
DIN KHAO	15	192.5	2888			
HUAI SAI	7	22.0	154			
TOTAL	142	67.8	9623	6	20.8	125

SOURCE: N10_1

SOURCE: N10_2

Table 4. AVERAGE NEW AREA PLANTED THIS YEAR BY LAND TYPE

n = The number of households clearing new land for cultivation this year.

MEAN = The average amount of new land cleared per household which cleared land.

VILLAGE TOTAL = Total new land cleared for cultivation by the village.

INTERPRETATION:

This data is one indicator of the availability of new land. Where new land is scarce, farmers would probably be more interested in sustainable agricultural practices than those where new land is readily available.

Table 4. AVERAGE NEW AREA PLANTED THIS YEAR BY LAND TYPE

Units: Rai

	NEW UPLAND AREA			NEW PADDY AREA		
	n	MEAN	VILLAGE TOTAL	n	MEAN	VILLAGE TOTAL
BAN KLANG+PHA KHAO	5	5.2	26	1	4.0	4
SAM SON BON	6	12.3	74			
PA KLUAI	9	22.4	202			
YANG SAN LANG+YANG SAN BON	3	10.7	32			
KONG LA				1	20.0	20
DIN KHAO	5	36.8	184			
HUAI SAI	2	24.5	49			
TOTAL	30	18.9	567	2	12.0	24

SOURCE: N16_1

SOURCE: N16_3

Table 5. AVERAGE UPLAND AREA PLANTED TO RICE AND YEARS FIELD USED

UPLAND RICE AREA

n = The number of households planting upland areas to rice this year.

MEAN = The average amount of upland area per household planted to rice.

VILLAGE TOTAL = Total upland area planted to rice by each village.

YEARS USED

n = The number of households reporting how many years their upland fields were used without fallow.

MEAN = The average number of years an upland field was used without fallow.

INTERPRETATION

These data are one indication of the degree to which a village is self-sufficient in rice.

A higher average number of years used is one indicator of land scarcity and, thus, potential interest in adopting sustainable agricultural practices.

Table 5. AVERAGE UPLAND AREA PLANTED TO RICE AND YEARS FIELD USED

Units: Rai

	UPLAND RICE AREA			YEARS USED	
	n	MEAN	VILLAGE TOTAL	n	MEAN
MAE LAEK	17	21.6	368	17	8.8
BAN KLANG+PHA KHAO	9	14.7	132	7	9.7
SAM SON BON	10	10.6	106	10	8.0
PA KLUAI	19	22.6	430	12	6.6
YANG SAN LANG+YANG SAN BON	39	24.9	973	35	5.9
OM LAN NOK	13	18.2	236	13	1.5
OM SOON KLANG	8	53.5	428	8	6.5
KONG LA	18	21.8	393	18	5.6
DIN KHAO	16	40.3	644	12	4.3
HUAI SAI	12	24.3	292	12	4.3
TOTAL	161	24.9	4002	145	6.0

SOURCE: N11_1 + N11_5 SOURCE: N11_2 and N11_6

Table 6. AVERAGE PADDY AREA PLANTED TO RICE AND YEARS FIELD USED

PADDY RICE AREA

n = The number of households planting paddy areas to rice this year.

MEAN = The average amount of paddy area per household planted to rice.

VILLAGE TOTAL = Total paddy area planted to rice by each village.

YEARS USED

n = The number of households reporting how many years their paddy fields were used without fallow.

MEAN = The average number of years an upland field was used without fallow.

VILLAGE TOTAL = Total paddy area planted to rice by each village.

INTERPRETATION

These data are one indication of the degree to which a village is self-sufficient in rice.

As paddy is not normally fallowed and fields are used indefinitely, data on how long a field was used are more an indication of when the paddy field was constructed.

Table 6. AVERAGE PADDY AREA PLANTED TO RICE AND YEARS FIELD USED

Units: Rai

	PADDY RICE AREA			YEARS USED	
	n	MEAN	VILLAGE TOTAL	n	MEAN
MAE LAEK	8	10.5	84	8	6.0
BAN KLANG+PHA KHAO	6	12.0	72	6	9.5
SAM SON BON	7	12.0	84	7	19.1
PA KLUAI	9	12.2	110	8	17.9
YANG SAN LANG+YANG					
SAN BON	24	21.7	520	24	22.5
OM LAN NOK	10	26.9	269	10	13.3
OM SOON KLANG	4	13.0	52	4	31.3
KONG LA	12	20.1	241	12	39.2
DIN KHAO	7	12.6	88	7	9.7
HUAI SAI	3	26.0	78	3	28.0
TOTAL	90	17.8	1598	89	20.2

SOURCE: N11_3 + N11_8

SOURCE: N11_4 and N11_9

Table 7. AVERAGE TOTAL AREA PLANTED TO OTHER CROPS

n = The total number of households planting field crops other than rice.

MEAN = The average area per household planted to field crops other than rice.

VILLAGE TOTAL = The total area planted to other field crops by the village.

INTERPRETATION

As many field crops are planted in rotation with rice, this area cannot be added directly to the area planted to rice to obtain total cultivated land area.

As many non-rice field crops are also commercial crops, these data are an indication of the degree to which the village is engaged in a cash crop production.

Table 7. AVERAGE TOTAL AREA PLANTED TO OTHER CROPS

Units: Rai

	OTHER CROP AREA		
	n	MEAN	VILLAGE TOTAL
MAE LAEK	7	7.1	50
BAN KLANG+PHA KHAO	5	14.4	72
SAM SON BON	3	10.7	32
PA KLUAI	5	10.0	50
YANG SAN LANG+YANG SAN BON	20	14.7	294
KONG LA	3	9.3	28
DIN KHAO	4	17.8	71
HUAI SAI	8	12.0	96
TOTAL	55	12.6	693

SOURCE: N11_7 and N11_10

Table 8. PLANTING OF UPLAND AND PADDY AREAS

UPLAND RICE PLANTED = The number and percentage of households which planted upland rice during the past year.

PLANTED SECOND UPLAND CROP AFTER RICE = The number and percentage of households which planted a second (non-rice) crop in their upland rice fields.

PADDY RICE PLANTED = The number and percentage of households which planted paddy rice during the past year.

PLANTED SECOND CROP AFTER PADDY = The number and percentage of households which planted a second (non-rice) crop in their paddy fields.

INTERPRETATION

These data show the relative importance of upland versus paddy rice and of second cropping. The data can be used to determine on which cropping patterns the project should focus its attention in each village.

Table 8 PLANTING OF UPLAND RICE AND PADDY AREAS

	UPLAND RICE PLANTED		PLANTED SECOND UPLAND CROP AFTER RICE		PADDY RICE PLANTED		PLANTED SECOND CROP AFTER PADDY		TOTAL
	NO	YES	NO	YES	NO	YES	NO	YES	
	MAE LAEK	5 26%	14 74%	5 26%	14 74%	8 42%	11 58%	12 63%	
BAN KLANG+PHA KHAO	4 33%	8 67%	6 50%	6 50%	7 58%	5 42%	7 58%	5 42%	12 100%
SAM SON BON	2 15%	11 85%	3 23%	10 77%	5 38%	8 62%	7 54%	6 46%	13 100%
PA KLUAI	1 5%	19 95%	1 5%	19 95%	12 60%	9 45%	11 55%	9 45%	20 100%
YANG SAN LANG+YANG SAN BON	12 24%	39 76%	14 27%	37 73%	28 55%	23 45%	29 57%	22 43%	51 100%
OM LAN NOK	3 21%	11 79%	9 64%	5 36%	4 29%	10 71%	12 86%	2 14%	14 100%
OM SOON KLANG		8 100%	7 88%	1 13%	4 50%	4 50%	7 88%	1 13%	8 100%
KONG LA	8 27%	22 73%	27 90%	3 10%	18 60%	12 40%	29 97%	1 3%	30 100%
DIN KHAO	3 16%	16 84%	8 42%	11 58%	12 63%	7 37%	15 79%	4 21%	19 100%
HUAI SAI	3 21%	11 79%	2 14%	12 86%	10 71%	4 29%	10 71%	4 29%	14 100%
TOTAL	41 21%	159 80%	82 41%	118 59%	108 54%	92 46%	139 70%	61 31%	200 100%

Table 9. AVERAGE QUANTITY OF RICE SEED PLANTED BY AREA TYPE

n = The total number of households planting rice.

MEAN = The average quantity of rice planted per household.

VILLAGE TOTAL = Total amount of seed planted by the village.

INTERPRETATION

These data can be extrapolated to area planted by determining the amount of seed planted per rai, and thus can be used as a check on (or as a substitute for) reported planted area.

Table 9. AVERAGE QUANTITY OF RICE SEED PLANTED BY AREA TYPE

Units: Thang

	UPLAND RICE SEED			PADDY RICE SEED		
	n	MEAN	VILLAGE TOTAL	n	MEAN	VILLAGE TOTAL
MAE LAEK	14	3.7	52	11	3.3	37
BAN KLANG+PHA KHAO	11	5.9	65	6	4.0	24
SAM SON BON	11	2.7	30	8	3.1	25
PA KLUAI	19	5.2	99	8	2.6	21
YANG SAN LANG+YANG SAN BON	39	5.3	207	23	3.8	87
OM LAN NOK	12	4.6	55	10	6.9	69
OM SOON KLANG	8	12.4	99	4	6.3	25
KONG LA	23	4.6	105	12	9.8	117
DIN KHAO	15	9.3	140	6	4.0	24
HUAI SAI	12	2.6	32	4	2.5	10
TOTAL	164	5.4	883	92	4.8	439

SOURCE: N3_2

SOURCE: N4_2

NOTE: 1 Thang = 20 Liters

Table 10. AVERAGE RICE YIELDS PER RAI BY LAND TYPE

n = Number of households reporting upland/paddy rice yields. The number of households may be lower than the number of rice planters because (1) no rice was harvested (crops were all destroyed) or (2) farmers did not respond to the questionnaire regarding yields or area planted.

MEAN = The average upland/paddy rice yield per rai in each village computed based on reported yields and reported area planted.

INTERPRETATION

This data can be used to identify villages with rice productivity problems.

Table 10. AVERAGE RICE YIELDS PER RAI BY LAND TYPE

Units: Thang/Rai

	UPLAND RICE		PADDY RICE	
	n	MEAN	n	MEAN
MAE LAEK	14	4.1	11	10.9
BAN KLANG+PHA KHAO	9	2.7	5	12.4
SAM SON BON	11	4.7	8	10.3
PA KLUAI	19	7.3	8	28.0
YANG SAN LANG+YANG SAN BON	39	3.4	23	12.1
OM LAN NOK	11	2.9	10	9.4
OM SOON KLANG	8	2.1	4	9.2
KONG LA	22	6.0	12	8.7
DIN KHAO	15	5.4	5	4.9
HUAI SAI	11	7.1	4	6.6
TOTAL	159	4.7	90	11.7

SOURCES: N3_4/N3_3 N4_4/N4_3

Note: 1 Thang = 20 Liters

Table 11. AVERAGE TOTAL RICE YIELD BY FIELD TYPE

n = Number of farmers harvesting rice. Some farmers either did not harvest any rice or did not respond to this survey question.

MEAN = Average total rice produced per household.

VILLAGE TOTAL = Total upland/paddy rice produced by a village.

INTERPRETATION

These data show whether a village is primarily dependent on paddy or upland fields for their rice, and thus would indicate possible directions for project focus.

Table 11. AVERAGE TOTAL RICE YIELD BY FIELD TYPE

Units: Thang

	UPLAND RICE			PADDY RICE		
	n	MEAN	VILLAGE TOTAL	n	MEAN	VILLAGE TOTAL
MAE LAEK	14	50.1	702	11	147.3	1620
BAN KLANG+PHA KHAO	10	45.0	450	6	140.8	845
SAM SON BON	11	43.4	477	8	93.6	749
PA KLUAI	19	113.7	2160	9	131.1	1180
YANG SAN LANG+YANG SAN BON	39	50.1	1953	23	174.0	4003
OM LAN NOK	11	55.5	610	10	223.5	2235
OM SOON KLANG	8	100.0	800	4	102.5	410
KONG LA	22	91.4	2010	12	187.5	2250
DIN KHAO	15	189.3	2840	6	55.2	331
HUAI SAI	11	66.5	732	4	119.8	479
TOTAL	160	79.6	12734	93	151.6	14102

SOURCE: N3_4

SOURCE: N4_4

Note: 1 Thang = 20 Liters

Table 12. TOTAL RICE YIELD, ANNUAL RICE NEEDS AND RICE SELF-SUFFICIENCY

TOTAL RICE YIELD

n = Number of households reporting rice yields.

MEAN = Average total quantity of rice produced per rice-producing household from both upland and paddy fields combined.

VILLAGE TOTAL = Total upland and paddy rice produced.

ANNUAL RICE NEEDS

n = Number of households reporting their annual rice needs. These data also include households which produced no rice.

MEAN = Amount of rice required per household per year.

VILLAGE TOTAL = Estimated total quantity of unmilled rice needed to feed all households the village for a year.

MONTHS HAVE ENOUGH RICE

n = Number of households reporting how many months they produce sufficient rice.

MEAN = Average months households are able to subsist on rice they produce themselves, i.e., excluding purchased rice.

INTERPRETATION

These data are a measure of whether or not farmers are able to produce sufficient rice for their own use.

Table 12. TOTAL RICE YIELD, ANNUAL RICE NEEDS AND RICE SELF-SUFFICIENCY

Units: Thang/Months

	TOTAL RICE YIELD (THANG)			ANNUAL RICE NEEDS (THANG)			MONTHS HAVE ENOUGH RICE	
	n	MEAN	VILLAGE TOTAL	n	MEAN	VILLAGE TOTAL	n	MEAN
MAE LAEK	19	123.3	2342	19	234.7	4460	19	5.9
BAN KLANG+PHA KHAO	11	103.3	1136	14	187.8	2629	12	6.3
SAM SON BON	13	94.3	1226	13	216.2	2810	13	6.2
PA KLUAI	19	197.4	3750	19	262.2	4981	19	6.4
YANG SAN LANG+YANG SAN BON	45	129.4	5825	50	163.8	8190	47	8.4
OM LAN NOK	12	225.4	2705	12	186.3	2236	14	8.0
OM SOON KLANG	8	145.0	1160	8	173.8	1390	7	8.5
KONG LA	19	192.6	3660	28	160.7	4500	25	10.6
DIN KHAO	10	179.3	1793	18	211.1	3800	16	9.2
HUAI SAI	10	117.1	1171	13	329.7	4286	12	7.8
TOTAL	166	149.2	24768	194	202.5	39282	184	7.9

SOURCE: N5

SOURCE: N7

SOURCE: N6

Note: 1 Thang = 20 Liters

Table 13. MONTHS HOUSEHOLDS HAVE ENOUGH RICE BY VILLAGE

The number and percent of households in each village which produce sufficient rice for their own consumption for the specified number of months.

INTERPRETATION

These data indicate which villages do not produce sufficient rice for their own consumption. Before the project plans to intervene to increase rice production, the reason for low rice output should be determined, e.g., in some villages, households may choose to produce other cash crops rather than rice; in others, they may prefer to work for wages to earn money to buy rice.

Table 13 MONTHS HOUSEHOLDS HAVE ENOUGH RICE BY VILLAGE

VILLAGE	MONTHS HAVE ENOUGH RICE			TOTAL
	0 TO 4 MONTHS	5 TO 8 MONTHS	9 TO 12 MONTHS	
MAE LAEK	10 53%	5 26%	4 21%	19 100%
BAN KLANG+PHA KHAO	6 50%	3 25%	3 25%	12 100%
SAM SON BON	6 46%	3 23%	4 31%	13 100%
PA KLUAI	7 35%	10 50%	3 15%	20 100%
YANG SAN LANG+YANG SAN BON	10 20%	19 37%	22 43%	51 100%
OM LAN NOK	5 36%	1 7%	8 57%	14 100%
OM SOON KLANG	1 13%	5 63%	2 25%	8 100%
KONG LA	7 23%	2 7%	21 70%	30 100%
DIN KHAO	4 21%	4 21%	11 58%	19 100%
HUAI SAI	5 36%	4 29%	5 36%	14 100%
TOTAL	61 31%	56 28%	83 42%	200 100%

Table 14. AVERAGE AMOUNT OF LABOR PER HOUSEHOLD AND DEPENDENCY RATIO

FAMILY LABOR AVAILABLE

n = The number of households reporting how many persons in their family can work in the fields.

MEAN = Average number of persons per household who can work in the fields.

VILLAGE TOTAL = Total labor available in each village.

DEPENDENCY RATIO

n = The number of households reporting both the number of persons in their family who can work in the fields and total family members.

MEAN = The average number of individuals each working person must support.

INTERPRETATION

These data give an indication about the size and scope of community development projects a village might be able to undertake. High dependency ratios generally mean less labor is available for new labor intensive activities. On the other hand, these villages might benefit from new labor-saving technologies.

Table 14. AVERAGE AMOUNT OF LABOR PER HOUSEHOLD AND DEPENDENCY RATIO

Units: Persons

	FAMILY LABOR AVAILABLE			DEPENDENCY RATIO	
	n	MEAN	VILLAGE TOTAL	n	MEAN
MAE LAEK	19	4.0	76	19	1.5
BAN KLANG+PHA KHAO	14	3.4	48	14	1.5
SAM SON BON	13	3.2	41	13	1.7
PA KLUAI	20	3.8	75	20	1.9
YANG SAN LANG+YANG SAN BON	48	2.9	141	48	2.7
OM SOON KLANG	8	3.5	28	8	1.7
KONG LA	19	3.0	57	19	2.4
DIN KHAO	12	3.4	41	12	1.7
HUAI SAI	6	2.8	17	6	1.7
TOTAL	159	3.3	524	159	2.1

SOURCE: N8

SOURCE: N2/N8

Table 15. CONSERVATION MEASURES EMPLOYED

n = The total number of household members in each village employing the indicated conservation activity.

MEAN = The average extent of the conservation activity implemented per household.

VILLAGE TOTAL = Total amount of the conservation activity implemented in each village.

INTERPRETATION

Both the mean and village total data can be used to evaluate the degree of acceptance of conservation methods.

Table 15. CONSERVATION MEASURES EMPLOYED

Units: As noted

	LIVING FENCE (METERS)			LIVING WINDBREAK (METERS)			TREES FOR SHADE (TREES)		
	n	MEAN	VILLAGE TOTAL	n	MEAN	VILLAGE TOTAL	n	MEAN	VILLAGE TOTAL
MAE LAEK				13	94.7	1231			
BAN KLANG+PHA KHAO	5	112.0	560	7	157.7	1104	2	220.0	440
SAM SON BON	1	50.0	50				1	160.0	160
PA KLUAI	3	100.0	300	9	115.0	1035			
YANG SAN LANG+YANG SAN BON	2	72.5	145	18	115.6	2080	2	106.0	212
OM LAN NOK	1	10.0	10	1	150.0	150	6	31.7	190
DIN KHAO	2	450.0	900				2	400.0	800
HUAI SAI	3	100.0	300						
TOTAL	17	133.2	2265	48	116.7	5600	13	138.6	1802

SOURCE: N17_1

SOURCE: N17_2

SOURCE: N17_3

Table 16. AVERAGE NUMBER OF LIVESTOCK OWNED PER HOUSEHOLD

n = The total number of households owning one or more animals of the type indicated.

MEAN = The average number of animals of the type indicated type owned by each household which owns one or more animals of the type indicated. This is NOT the average number of animals of each type owned per household by the entire village.

VILLAGE TOTAL = The total number of animals of each type in each village.

INTERPRETATION

Mean data can help in planning which villages would most benefit from outreach activities to increase livestock production. Village total data can be used to plan village-wide livestock activities, e.g., vaccination campaigns.

Table 16. AVERAGE NUMBER OF LIVESTOCK OWNED PER HOUSEHOLD

Units: Animals

	ELEPHANTS			BUFFALOES			CATTLE		
	n	MEAN	VILLAGE TOTAL	n	MEAN	VILLAGE TOTAL	n	MEAN	VILLAGE TOTAL
MAE LAEK				5	4.2	21	4	6.0	24
BAN KLANG+PHAKHAO				4	1.3	5	5	4.4	22
SAM SON BON				4	1.5	6	9	3.6	32
PA KLUAI	2	1.5	3	12	3.6	43	2	3.5	7
YANG SAN LANG+YANG SAN BON				25	3.6	90	18	4.9	88
OM LAN NOK	4	1.0	4	10	6.6	66	6	3.7	22
OM SOON KLANG				4	2.8	11	1	2.0	2
KONG LA				7	3.3	23	5	3.0	15
DIN KHAO				11	2.3	25	9	6.1	55
HUAI SAI				4	1.5	6	6	5.0	30
TOTAL	6	1.2	7	86	3.4	296	65	4.6	297

SOURCE: N35_1

SOURCE: N35_2

SOURCE: N35_3

Table 16. AVERAGE NUMBER OF LIVESTOCK OWNED PER HOUSEHOLD
(cont.)

n = The total number of households owning one or more animals of the type indicated.

MEAN = The average number of animals of the type indicated owned by each household which owns one or more animals of the type indicated. This is NOT the average number of animals of each type owned per household by the entire village.

VILLAGE TOTAL = The total number of animals of each type in each village.

INTERPRETATION

Mean data can help in planning which villages would most benefit from outreach activities to increase livestock production. Village total data can be used to plan village-wide livestock activities, e.g., vaccination campaigns.

Table 15. AVERAGE NUMBER OF LIVESTOCK OWNED PER HOUSEHOLD (cont.)

Units: Animals

	PIGS			DUCKS			CHICKENS		
	n	MEAN	VILLAGE TOTAL	n	MEAN	VILLAGE TOTAL	n	MEAN	VILLAGE TOTAL
MAE LAEK	12	1.8	21	1	10.0	10	18	15.9	286
BAN KLANG+PHA KHAO	11	1.5	17				13	8.1	105
SAM SON BON	13	2.2	29				13	12.2	159
PA KLUAI	11	2.9	32				16	19.8	316
YANG SAN LANG+YANG SAN BON	45	2.7	123	3	4.3	13	51	9.7	497
OM LAN NOK	9	2.3	21	3	2.7	8	13	12.5	163
OM SOON KLANG	2	1.0	2				7	12.1	85
KONG LA	16	2.9	46	1	1.0	1	16	13.0	208
DIN KHAC	15	3.2	48	1	2.0	2	14	9.1	128
HUAI SAI	10	1.8	18				10	8.4	84
TOTAL	144	2.5	357	9	3.8	34	171	11.9	2031

SOURCE: N35_4

SOURCE: N35_5

SOURCE: N35_6

Table 17. MALE HIRED LABOR

MALE WORKERS

n = Number of households with one or more male members who worked for wages off the family farm in the past year.

MEAN = Average number of male family members who worked for wages off the farm per household with one or more male members who worked.

VILLAGE TOTAL = Total number of males in the village who worked for wages off the family farm in the past year.

DAYS WORKED/YEAR

n = Number of households with one or more male members who worked for wages off the family farm in the past year and who answered this survey question. (Not all households with working males answered.)

MEAN = Average number of days worked by ALL males in each household with one or more males who worked.

VILLAGE TOTAL = Total number of days worked off the family farm for wages in the past year by all males in the village who worked.

ANNUAL INCOME

n = Number of households with one or more male members who worked for wages off the family farm in the past year and who answered this survey question. (Not all households with working males answered.)

MEAN = Average total income from male off-farm labor per household for households with one or more male members who worked for wages off the family farm in the past year.

VILLAGE TOTAL = Total income from male off-farm labor for the village in the past year.

INTERPRETATION

These data indicate the relative importance of male off-farm income to the households. Where off-farm income is high, interest in agricultural activities may be reduced.

Table 17. MALE HIRED LABOR

Units: Households; Days per year; Baht

	MALE WORKERS			DAYS WORKED/YEAR			ANNUAL INCOME		
	n	MEAN	VILLAGE TOTAL	n	MEAN	VILLAGE TOTAL	n	MEAN	VILLAGE TOTAL
MAE LAEK	12	1.3	15	12	100	1201	11	6712	73830
BAN KLANG+PHA KHAO	13	1.2	15	13	71	918	13	3982	51762
SAM SON BON	12	1.6	19	12	77	928	12	5957	71488
PA KLUAI	12	1.3	16	12	102	1226	12	1516	18190
YANG SAN LANG+YANG SAN BON	41	1.2	49	41	93	3804	41	4623	189541
OM LAN NOK	8	1.5	12	8	109	868	7	3993	27950
OM SON KLANG	8	1.0	8	8	95	760	8	4631	37050
KONG LA	25	1.1	28	23	103	2379	24	7005	168120
DIN KHAO	17	1.2	20	15	121	1809	16	6053	96850
HUAI SAI	11	1.2	13	11	148	1625	10	9152	91518
TOTAL	159	1.2	195	155	100	15518	154	5366	826299

SOURCE: N36_1

SOURCE: N36_2

SOURCE: N36_3

Table 18. FEMALE HIRED LABOR

FEMALE WORKERS

n = Number of households with one or more female members who worked for wages off the family farm in the past year.

MEAN = Average number of female family members who worked for wages off the farm per household with one or more female members who worked.

VILLAGE TOTAL = Total number of females in the village who worked for wages off the family farm in the past year.

DAYS WORKED/YEAR

n = Number of households with one or more female members who worked for wages off the family farm in the past year and who answered this survey question. (Not all households with working females answered.)

MEAN = Average number of days worked by ALL females in each household with one or more females who worked.

VILLAGE TOTAL = Total number of days worked off the family farm for wages in the past year by all females in the village who worked.

ANNUAL INCOME

n = Number of households with one or more female members who worked for wages off the family farm in the past year and who answered this survey question. (Not all households with working females answered.)

MEAN = Average total income from female off-farm labor per household for households with one or more female members who worked for wages off the family farm in the past year.

VILLAGE TOTAL = Total income from female off-farm labor for the village in the past year.

INTERPRETATION

These data indicate the relative importance of female off-farm income to the households. Where off-farm income is high, interest in agricultural activities may be reduced. Also, as women have the primary responsibility for raising children, etc., a high level of female off-farm employment may be an indication of overall village poverty.

Table 18. FEMALE HIRED LABOR

Units: Households; Days per year; Baht

	FEMALE WORKERS			DAYS WORKED/YEAR			ANNUAL INCOME		
	n	MEAN	VILLAGE TOTAL	n	MEAN	VILLAGE TOTAL	n	MEAN	VILLAGE TOTAL
MAE LAEK	15	1.3	19	15	50	746	14	3000	41997
BAN KLANG+PHA KHAO	3	1.3	4	3	11	33	3	3732	11196
SAM SON BON	3	1.3	4	3	108	324	3	4262	12786
PA KLUAI	7	1.9	13	7	66	460	7	1560	10920
YANG SAN LANG+YANG SAN BON	15	1.1	16	15	28	421	15	1034	15505
OM LAN NOK	5	1.4	7	5	43	216	5	2956	14780
OM SOON KLANG	2	1.0	2	2	20	40	3	2433	7300
KONG LA	17	1.3	22	17	85	1442	17	4043	68730
DIN KHAO	14	1.4	20	14	85	1183	14	3820	53482
HUAI SAI	8	1.1	9	8	87	697	7	4063	28443
TOTAL	89	1.3	116	89	62	5562	88	3013	265139

SOURCE: N36_4

SOURCE: N36_5

SOURCE: N36_6

Table 19. AVERAGE TOTAL LABOR INCOME

n = Total number of households with one or more members earning income from labor off the family farm in the past year.

MEAN = Total annual income per household for households with one or more members earning off-farm income from labor.

VILLAGE TOTAL = Total annual income for the village from off-farm labor.

INTERPRETATION

These data indicate the relative importance of off-farm income to the households. Where off-farm income is high, interest in agricultural activities may be reduced.

Table 19. AVERAGE TOTAL LABOR INCOME

Units: Baht

	FROM LABOR		
	n	MEAN	VILLAGE TOTAL
MAE LAEK	14	8906	124677
BAN KLANG+PHA KHAO	13	4835	62858
SAM SON BON	7	6628	46394
PA KLUAI	13	3168	41180
YANG SAN LANG+YANG			
SAN BON	42	5076	213196
OM LAN NOK	8	3591	28730
OM SOON KLANG	7	5686	39800
KONG LA	27	8702	234950
DIN KHAO	17	10318	175412
HUAI SAI	9	11262	101361
TOTAL	157	6806	1068558

SOURCE: N36_7

Table 20. AVERAGE ANNUAL INCOME BY SOURCE

n = Number of households earning income from the indicated source.

MEAN = Average income per household for households earning income from the indicated source.

VILLAGE TOTAL = Total income to all households in the village from the indicated source.

INTERPRETATION

These data show the relative importance of various sources of income. The data could help the project determine in which areas project intervention is most appropriate.

Table 20. AVERAGE ANNUAL INCOME BY SOURCE

Units: Baht

	FROM CROPS			FROM LIVESTOCK		
	n	MEAN	VILLAGE TOTAL	n	MEAN	VILLAGE TOTAL
MAE LAEK	14	3883	54364	8	3746	29965
BAN KLANG+PHA KHAO	6	1264	7586	2	910	1820
SAM SON BON	2	3500	7000	4	1838	7350
PA KLUAI	5	5535	27675	9	1178	10600
YANG SAN LANG+YANG						
SAN BON	25	2858	71449	17	3666	62330
OM LAN NOK	10	21355	213550	6	9847	59080
OM SOON KLANG	5	15880	79400	1	3000	3000
KONG LA	17	7261	123443	5	2188	10940
DIN KHAO	14	8292	116081	8	8418	67340
HUAI SAI	12	4815	57780	5	3168	15840
TOTAL	110	6894	758328	65	4127	268265

SOURCE: N38_3

SOURCE: N38_1

Table 20. AVERAGE ANNUAL INCOME BY SOURCE (cont.)

n = Number of households earning income from the indicated source.

MEAN = Average income per household for households earning income from the indicated source.

VILLAGE TOTAL = Total income to all households in the village from the indicated source. These data indicate the relative importance in terms of cash income of the various sources of income.

INTERPRETATION

These data show the relative importance of various sources of income. The data could help the project determine in which areas project intervention is most appropriate.

Table 20. AVERAGE ANNUAL INCOME BY SOURCE (cont.)

Units: Baht

	FROM OTHER SOURCES			FROM FORESTS		
	n	MEAN	VILLAGE TOTAL	n	MEAN	VILLAGE TOTAL
MAE LAEK	3	463	1390	3	80	240
BAN KLANG+PHA KHAO						
SAM SON BON	3	19583	58750	1	80	80
PA KLUAI	1	2000	2000	1	10	10
YANG SAN LANG+YANG						
SAN BON	2	5970	11940			
OM LAN NOK	2	3500	7000			
OM SOON KLANG	1	5900	5900	2	5100	10200
KONG LA	6	3380	20280	4	23	90
DIN KHAO	5	2370	11850	6	148	890
HUAI SAI	4	402	1607	4	90	360
TOTAL	27	4471	120717	21	565	11870

SOURCE: N38_5

SOURCE: N38_4

Table 21. AVERAGE TOTAL ANNUAL INCOME/EXPENDITURE PER HOUSEHOLD

n = Number of households reporting annual income/expenditure.

MEAN = Average annual cash income/expenditure from all sources of households reporting these data.

VILLAGE TOTAL = Total income/expenditure from all sources per household reporting these data.

INTERPRETATION

This information can be used, in conjunction with non-cash crop yield data, to determine the relative overall economic status of each village.

Table 21. AVERAGE TOTAL ANNUAL INCOME/EXPENDITURE PER HOUSEHOLD

Units: Baht

	INCOME			EXPENDITURE		
	n	MEAN	VILLAGE TOTAL	n	MEAN	VILLAGE TOTAL
MAE LAEK	19	12097	229846	18	8000	144003
BAN KLANG+PHA KHAO	13	5566	72364	13	1415	18393
SAM SON BON	13	12527	162854	13	7948	103330
PA KLUAI	15	3662	54925	20	4749	94970
YANG SAN LANG+YANG SAN BON	48	7369	353715	51	5477	279330
OM LAV NOK	14	23133	323800	14	19452	272330
OM SOON KLANG	7	15471	108300	8	12486	99890
KONG LA	27	13137	354703	30	10597	317920
DIN KHAO	18	19367	348611	18	11724	211033
HUAI SAI	13	15042	195548	14	7426	103967
TOTAL	187	11790	2204726	199	8267	1645166

SOURCE: N39

SOURCE: N42

Table 22. HOUSEHOLDS WITH MOSQUITO NETS

This table shows the number of households in each village which have one or more mosquito nets.

INTERPRETATION

Due to the prevalence and severity of malaria, these data indicate in which villages a mosquito net program should be considered.

Table 22. HOUSEHOLDS WITH MOSQUITO NETS

	HAVE	NONE
MAE LAEK	7 37%	12 63%
BAN KLANG+PHA KHAO	1 8%	12 92%
SAM SON BON	3 23%	10 77%
PA KLUAI	5 25%	15 75%
YANG SAN LANG+YANG SAN BON	15 29%	36 71%
OM LAN NOK	2 14%	12 86%
OM SOON KLANG		8 100%
KONG LA	9 30%	21 70%
DIN KHAO	6 32%	13 68%
HUAI SAJ	5 36%	9 64%
TOTAL	53 26%	148 74%

SOURCE: N45

Table 23. AVERAGE NUMBER OF ADDICTS PER HOUSEHOLD

ADDICTS PER HH = The average number of addicts per household in each village calculated as total addicts in a village divided by the total number of households in that village.

TOTAL ADDICTS = Total number of addicts in each village.

PERCENT ADDICTS = The percentage of the entire village population who are addicts.

INTERPRETATION

These data show both the relative severity of the addiction problem in each village (which could affect the success of project activities) and the absolute magnitude of the addiction problem which could be used for, e.g., planning rehabilitation activities.

Table 23. AVERAGE NUMBER OF ADDICTS PER HOUSEHOLD

Units: Persons

	ADDICTS PER HH	TOTAL ADDICTS	PERCENT ADDICTS
MAE LAEK	.23	5	4.7%
BAN KLANG+PHA KHAO	.13	1	1.7%
SAM SON BON	.14	3	3.3%
PA KLUAI	.00	0	0.0%
YANG SAN LANG+YANG SAN BON	.18	9	3.7%
OM LAN NOK	.29	4	5.6%
OM SOON KLANG	.25	2	4.4%
KONG LA	.00	0	0.0%
DIN KHAO	.37	7	6.5%
HUAI SAI	.00	0	0.0%
TOTAL	.16	31	2.9%

SOURCE: Village Summary Statistics - total addicts per village

Table 24. TOTAL NUMBER OF MALNOURISHED CHILDREN PER HOUSE
HOLD BY DEGREE OF MALNUTRITION

NUTRIT. GRADE = The average number of children with malnutrition by level of malnutrition: Grade 0 = normal; Grade 1 = mild; Grade 2 = moderate; Grade 3 = severe.

TOTAL CHILDREN = the total number of children which were evaluated in the village.

INTERPRETATION

These data indicate in which villages there may be a need for nutrition improvement programs, e.g., nutrition education, kitchen gardens, school gardens, etc.

Table 24. TOTAL NUMBER OF MALNOURISHED CHILDREN
PER HOUSEHOLD BY DEGREE OF MALNUTRITION

	NUTRIT. GRADE 0	NUTRIT. GRADE 1	NUTRIT. GRADE 2	NUTRIT. GRADE 3	TOTAL CHILDRN
MÆ LAEK	4 31%	9 69%	0 0%	0 63%	13 100%
BAN KLANG+PHA KHAO	3 50%	3 50%	0 0%	0 0%	6 100%
SAM SON BON	6 67%	2 22%	1 11%	0 0%	9 100%
PA KLUAI	6 50%	4 33%	2 17%	0 0%	12 100%
YANG SAN LANG+YANG SAN BON	1 8%	10 77%	2 15%	0 0%	13 100%
OM LAN NOK	6 75%	1 12%	1 12%	0 0%	8 100%
OM SOON KLANG	3 60%	2 40%	0 0%	0 0%	5 100%
KONG LA	13 52%	9 36%	3 12%	0 0%	25 100%
DIN KHAO	4 33%	6 50%	2 17%	0 0%	12 100%
HUAI SAI	1 14%	6 86%	0 0%	0 0%	7 100%
TOTAL	47 43%	52 47%	11 10%	0 0%	110 100%

SOURCE: Village Summary Statistics - total malnourished children divided by total children weighed.

Table 25. POPULATION OF PROJECT VILLAGES

TOTAL PERSONS = Total number of villagers of all ages in each village.

TOTAL HH = Total number of households in each villages.

PERSONS PER HH = The average number of persons living in each household.

INTERPRETATION

This data can be used in planning project activities to determine the absolute number of persons who might be involved. It can also be used to determine the percentage of households engaging in any given activity, e.g., the percent of households which raise buffalo.

Table 25. POPULATION OF PROJECT VILLAGES

Units: Persons; households

	TOTAL PERSONS	TOTAL HH	PERSONS PER HH
MAE LAEK	107	22	4.9
BAN KLANG+PHA KHAO	60	13	4.6
SAM SON BON	90	22	4.1
PA KLUAI	117	22	5.3
YANG SAN LANG+YANG SAN BON	243	51	4.8
OM LAN NOK	72	14	5.1
OM SOON KLANG	45	8	5.6
KONG LA	153	30	5.1
DIN KHAO	107	19	5.6
HUAI SAI	66	14	4.7
TOTAL	1060	215	4.9

SOURCE: Village Summary Statistics - total persons, total households

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