CHAPTER 3

METHODOLOGY

3.1 Sample Selection

3.1.1 Population

Residents in Yao Noi sub-district, Yao Noi District Phang-Nga Province were the target population. The total number of household in Koh Yao Noi was 1,407 (Yao Noi Sub-District Municipality, 2005).

3.1.2 Sample

The residents were people who live with their family and work at Koh Yao Noi and at least 18 years old was the targeted sample. They were local people who were and were not directly involve in tourism business.

3.1.3 Sampling Method

The number of the sample was obtained by Yamane method (Yamane, 1973) as follows:

$$n = N / (1 + Ne^2)$$

When

n was size of sample

N was size of population

e was the level of precision (A 95% confidence level and $\pm$ 5% precision levels were assumed)

Then

$$n = 1407 / [(1) + 1407 (0.05)^2]$$

$$n = 311.45$$

The researcher decided to use 310 as a sample size from 1,407 households. Those were in 7 villages and 1 municipality. The sample size was divided by the size of population and calculated into percentage in order to get the sample size in each village which was 22% of households (gotten from [310/1,407]*100). However, the sample size in each village was 22% of the households, but the researcher had adjusted number of households because of the number fluctuation. The minimal at 25 households was assigned to get the appropriate average numbers in each village. At the same time, reduced the size of households in village 5, and increase in village 1 and 7 to maintain the size of sample at 310 (Table 3.1).

Table 3.1: Calculation of Sample Size in Each Village

Village	Number of Households	22% of Households	Adjusted Sample Size
Municipality Area	221	49	49
Village 1	75	16	25
Village 2	167	37	37
Village 3	204	45	45
Village 4	141	31	31
Village 5	304	67	54
Village 6	200	44	44
Village 7	95	21	25
Total	1,407	310	310

The sample size in each village was obtainned, and then the researcher selected people in households in each village and the municipality area from the Koh Yao Noi Sub-District Name List in Phang-Nga Province Administration Organization Election 2004. All of them were at least 18 years old and has the right to vote for this election. The researcher selected people whose ID. Numbers ended with 3, 6 and 9, then recorded the house number of the selected households (Appendix B). Moreover, they must not have the same family name because the researcher wants to collect data from different families and decrease the respondents' bias.

3.2 Research Design

This study was quantitative research, collected data from the local residents perspective. The research began with reviewing literature intended for collecting the related information. Then, the area surveying was conducted as well as informal meeting with key persons in Koh Yao Noi to get the current information of tourism development for more ideas to develop the research instrument. After developing the questionnaire, the researcher had consulted with adviser and revised it. Then 10 questionnaires were pre-tested with local residents. The comments, suggestions, and recommendations to the questionnaires were collected and then discussed with research advisor, for appropriate revision before launching the questionnaires to targeted sample.

3.3 Research Instrument

The questionnaire was the common research instrument and the researcher selected the personally administered questionnaire after reviewing the advantages, disadvantages and the limitations in finance and time. This instrument could establish relationship, motivate respondent, the doubts could be clarified, less expensive and almost 100 percentage response rate ensured (Sekaran, 2003). In this case, the personally administered questionnaire was used for the research of community participation for sustainable tourism development at Koh Yao Noi, Changwat Phang-Nga. It comprised of 5 parts in Thai version for local residents as the followings (Appendix C).

3.3.1 Part 1: Demographic Characteristics

This part had altogether 10 questions related to the demographic characteristics and some personal information of the respondents. It consisted of a checklist and opened-end question. It combined the question of gender, age, education level, occupation, monthly income, social role, hometown, length of living at Koh Yao Noi, respondents' occupation related to tourism, and family member's occupation related to tourism.

3.3.2 Part 2: Ecotourism and Sustainable Tourism Knowledge

There were 10 questions to examine the recognition in eco-tourism and sustainable tourism of host community. The first five questions was ecotourism and the rest were sustainable tourism indicators. There were two scales, of true and false in each question.

3.3.3 Part 3: The Interest Level of Community Participation in Sustainable Tourism Development

There were 7 questions, the first six questions were the issue of tourism development participation in planning, decision-making, problem solving, implementation, evaluation and benefit gaining. There were 5 components in each main issue and using "Interval Scale" in the range of 0-5 in order to examine the interest level in participation. It was ranged from most negative response to most positive response, 0 defined as no interest to participate and 5 means strongly interested to participate. Another question was related to the appropriate length of time to participate in the activities of sustainable tourism development.

3.3.4 Part 4: The Motivation influenced the Participation in Sustainable Tourism Development

There were 4 issues of motivation based on tourism benefits; those were socio-cultural benefits, environmental benefits and economic benefits including the interest in information gathering. There were 5 components in each main issue and using Interval Scale in the range of 0-5 in order to examined the important level of those motivations. It was ranged from most negative response to most positive response, 0 defined as not important and 5 mean the superlative important.

3.3.5 Part 5: Recommendations

This part consisted of 7 open-ended questions, 6 questions were related to the ways that were able to persuade or encourage people in community to participate in sustainable tourism development activities in terms of planning, decision-making, problem solving, implementation, evaluation and investment altogether with benefit sharing. The last question was the reasons that make respondents had minor or no participation in the sustainable tourism development activities.

3.4 Data Collection

3.4.1 Primary Data

The period of collecting data was in September to October 2005. The researcher distributed 310 sets of questionnaire to the target households in each village and also did informal interviews, based on the questionnaire, in some households by convenience selection. The questionnaires were carried out with adult family members who were community residents, at least 18 years old and who were able to respond to the questionnaires effectively. When there were more than one adult in the family presented at the time of the survey, the family was free to choose the representative to answer the questionnaire.

3.4.2 Secondary Data

The relevant concepts, ideas, theories, and research were taken from different sources. Those were from articles, journals, and tourism researches from University's library and Internet to support and complete the research. The general information and tourism information of Koh Yao Noi was obtained from district office, sub-district administration organization, municipality, and local tourism clubs at Koh Yao Noi.

3.5 Data Analysis

The data was analyzed by SPSS 11.0 for Windows. The statistics used in this research were related to the objectives of the analysis and the characteristic of the data. The researcher decided to use the frequencies, Percentages, Means, Pearson's Chi-Square, One-Way ANOVA, Independent Samples T-Test, "P-Standard of knowledge", and "Principal Component Analysis" method.

P-Standard of Knowledge

This P-Standard of Knowledge was the "Optimistic Goal Cut-off Standard values" and it was used to indicate the percentage of resident amounts, who had mean score of knowledge in ecotourism and sustainable tourism above 0.75 (Thonnam, 2005). It was used to analyze the data collected from part 2 in questionnaire. The respondents who had mean score over 0.75 in ecotourism or sustainable tourism indicators were defined that they had recognition to ecotourism or sustainable tourism.

Principal Component Analysis

The multivariate technique of Principal Component Analysis in Data Reduction was used in order to simplify the components into a single one as well as to simplify the comparisons with other variables. The method employs with implementing a proper linear combination and data reduction which would be best "pooled explain" of all the components in its category (Appendix D).

A different part of the questionnaire was used for the appropriate statistic to analyze for the uncomplicated interpretation. They were as the followings:

Part 1: Demographic Characteristics data was the analyzed by descriptive statistics, those were frequency and percentage.

Part 2: Ecotourism and sustainable tourism knowledge was analyzed by using frequency, Means, One-Way ANOVA, P-Standard of knowledge of ecotourism and sustainable tourism, and Principle Component Analysis.

Part 3: The interest level of community participation in sustainable tourism development was ranged by the Interval Scale from 0 to 5. Interval scale was used when responded to the various items that measure a variable could be tapped on a five-point

(or seven-point or any other number of points) scale, which could subsequently be summated across the items (Sekaran, 2003).

The descriptive statistics were used, those were frequency and percentage. The researcher also uses means comparison, One-Way ANOVA, Independent Samples T-Test, and Principle Component Analysis to get the statistic results.

The means scores were classified into 6 interval scales, calculated as follows:

The Interval level = [Max - Min] / n

$$= [5-0]/ 6$$

$$= 0.83$$

Then, the researcher had ranged the interest level as follows:

Interval Scale	Mean Scores	Interest Levels of Participation
5	4.16 - 5.00	The superlative interest
4	3.33 - 4.15	High interest
3	2.50 - 3.32	Moderate interest
2	1.67 - 2.49	Low interest
1	0.84 - 1.66	Least interest
0	0.00 - 0.83	No interest

Another issue in part 3 was the appropriate time to participate in sustainable tourism development. It was analyzed by Pearson Chi-Square in order to examine the independency between groups of respondents and appropriate time participated.

In order to simplify the 5 components of each participative indicator into a single one, the researcher also use Principal Component Analysis for grouping 20 participative components into 4 key motivational indicators (Appendix D).

Part 4: The important levels of motivation for participating in sustainable tourism development were ranged by the Interval Scale from 0 to 5. The data was analyzed by frequency, percentage, mean, One-Way ANOVA and Independent Samples T-Test to know the statistical results. In order to simplify the 5 components into a single one, the researcher also use Principal Component Analysis method in Data Reduction for grouping 20 motivational components into 4 key motivational indicators.

Part 5: Recommendation data was analyzed by descriptive statistics. Those were Frequencies and Percentage.