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**PEOPLE'S PARTICIPATION IN COMMUNITY FOREST  
MANAGEMENT: A CASE STUDY OF KHOK YAI COMMUNITY  
FOREST, MAHASARAKHAM PROVINCE**

**NPHA KRISSADARUENGSRISRI**  
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With commitments  
of

บัณฑิตวิทยาลัย มหาวิทยาลัยมหิดล

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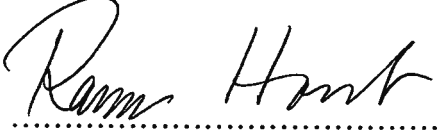
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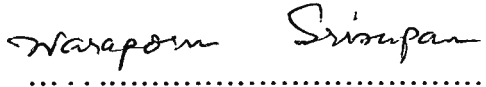
  
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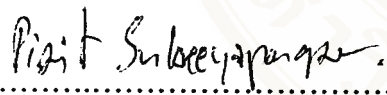
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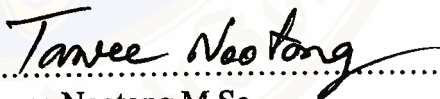
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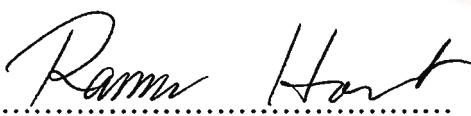
  
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Napha Krissadaruengsri

PEOPLE'S PARTICIPATION IN COMMUNITY FOREST MANAGEMENT : A CASE STUDY OF KHOK YAI COMMUNITY FOREST, MAHASARAKHAM PROVINCE

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ABSTRACT

This research was to study levels of people's participation in community forest management and the factors relating to it including the problems, barriers, and recommendations in the management of the community forest. A Survey Research was conducted in association with the Qualitative Research using Questionnaire and sampling 360 household heads or couples living around the Khok Yai forest. An In-depth Interview was used with 9 leading committee members networking and the chairman of the Tambon Administration. SPSS/PC+ was used in data analysis implementing percentage, mean, standard deviation, frequency and Chi-square as the statistical application.

It was concluded that people had moderate participation in the community forest management, People's participation was related to gender, education, social status, news reception of community forest, knowledge of community forest, and suggestions of community forest management with statistical significance at 0.05 level. Factors of age, number of family members, occupation, family annual income, duration of stay in the community, and the benefit gained from the community forest had no relationship with the people's participation at any statistical significance at 0.05 level.

It is recommended that individual groups or related units should make the community aware of the criticality of the community forest, and broadcast by radio in the villages as well as providing opportunities to the local to share in the community forest management to cultivate a perpetual awareness among the locals of the forest.

KEY WORDS : PEOPLE'S PARTICIPATION / COMMUNITY FOREST MANAGEMENT

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#### บทคัดย่อ

ในการศึกษาวิจัยในครั้งนี้มีวัตถุประสงค์เพื่อศึกษาระดับการมีส่วนร่วมของประชาชนในการจัดการป่าชุมชน ปัจจัยที่มีความสัมพันธ์กับการมีส่วนร่วมของประชาชน รวมทั้งศึกษาปัญหาและอุปสรรคในการจัดการป่าชุมชน เป็นการศึกษาวิจัยเชิงสำรวจ (Survey Research) ร่วมกับการวิจัยเชิงคุณภาพ (Qualitative Research) โดยการใช้แบบสอบถาม (Questionnaires) กับกลุ่มประชาชนที่อาศัยอยู่รอบๆพื้นที่ป่าชุมชนโคกใหญ่ที่เป็นหัวหน้าครัวเรือนหรือคู่สมรส จำนวน 360 ราย และแบบสัมภาษณ์แบบเจาะลึก (In-depth Interview) กับกลุ่มคณะกรรมการเครือข่ายป่าชุมชนโคกใหญ่ และประธานบริหารองค์การบริหารส่วนตำบล จำนวน 9 ราย วิเคราะห์ข้อมูลโดยใช้โปรแกรมสำเร็จรูปสำหรับการวิจัยทางสังคมศาสตร์ ใช้ค่าสถิติร้อยละ ค่าเฉลี่ยเลขคณิต ค่าเบี่ยงเบนมาตรฐาน การแจกแจงความถี่ และวิเคราะห์ความสัมพันธ์ของตัวแปรต้นและตัวแปรตาม โดยใช้ค่าสถิติไค-สแควร์

ผลการวิจัยสรุปได้ว่าประชาชนมีส่วนร่วมในการจัดการป่าชุมชนในระดับปานกลางซึ่งไม่เป็นไปตามสมมุติฐานที่ตั้งไว้โดยระดับการมีส่วนร่วมของประชาชนมีความสัมพันธ์กับ ๗๙ ระดับการศึกษา สถานภาพในสังคม การได้รับข่าวสารเรื่องป่าชุมชน ความรู้เกี่ยวกับป่าชุมชน และความคิดเห็นเกี่ยวกับการจัดการป่าชุมชน อย่างมีนัยสำคัญทางสถิติที่ระดับ 0.05 ส่วนปัจจัยทางด้าน อายุ จำนวนสมาชิกในครัวเรือน อาชีพ รายได้ครอบครัวต่อปี ระยะเวลาที่อาศัยในชุมชน และการใช้ประโยชน์จากป่าชุมชน ไม่ได้มีความสัมพันธ์กับระดับการมีส่วนร่วม อย่างมีนัยสำคัญทางสถิติที่ระดับ 0.05

ข้อเสนอแนะจากการวิจัยกลุ่มบุคคลหรือหน่วยงานที่เกี่ยวข้องจะต้องมีการเผยแพร่ประชาสัมพันธ์ให้ประชาชนในท้องถิ่น ได้รับรู้ถึงความสำคัญของการมีป่าชุมชน และการมีส่วนร่วมในการจัดการป่าชุมชน ในรูปแบบของการฝึกอบรมและการเผยแพร่ทางหอกระจายข่าวประจำหมู่บ้าน และควรเปิดโอกาสให้ประชาชนในท้องถิ่นได้เข้ามามีส่วนร่วมในการจัดการป่าชุมชนอย่างทั่วถึงเพื่อเป็นการปลูกฝังจิตสำนึกให้กับประชาชนในท้องถิ่นอย่างยั่งยืนถาวร

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## **CHAPTER I**

### **INTRODUCTION**

#### **1.1 Background and Significance of the Problems**

Since the past to present no countries rejects that “forest” is the essential natural resources to the social development and the living of human directly and indirectly. For examples, there are wood tissues and wood products, as well as the resources of 4 means in human life also, a factor causing seasonal rains. Further, the forest is also the essential resource for national economic and social development. It provides the needs beyond fundamental factors contributing a better happy living for human. As a saying in English that "Man cannot exist without wood" (Amnuay Korvanit, BE 2527:18-24).

However, consequences of the economic development of Thailand during the past BE 2540 causing the rich natural resources decreasing and deteriorating. Due to the implementation of the Plan 1 of the National Economic And Social Development since Be 2504, and the senseless consumption of the natural resources, particularly, the forest has been exploited as key production of the country. In association with the policy of the Forestry Department during that period emphasized solely the exploitation of forest, which led the drastic declines of forest apparently affecting the life and the living of the rural people and its ecology.

From the statistics of the Forestry Department, it is found out that in BE 2504, Thai had 171,017,812 rais of the forest or 53.33% comparing to the national territory. It is continued decreasing till BE 2541, it remains 81,076,428 rais of the forest or 25.27% as shown in Table 1

Table 1 Forest Areas by Annual Classification, BE 2504-2541

BE	Areas of Forest (Rais)	Areas of Forest ( %)
2504	171,017,812	53.33
2516	138,578,125	43.71
2521	108,515,000	38.67
2525	97,875,000	30.52
2528	95,292,349	29.05
2531	89,977,180	28.00
2532	89,635,625	27.95
2534	85,346,284	26.64
2536	83,470,967	26.02
2538	82,188,161	25.63
2541	81,076,428	25.27

*Sources: the Forestry Department: Statistics of Forest BE 2541, Forestry Department, Ministry of Agriculture and Cooperatives BE 2541*

From the remain forest and the decreasing rate of areas till BE 2541 as stated, even the government enforced the measures of close forest, no transportation of logs, and transforming woods for exports since the government of General Chartchai Choonhawan in BE 2532, however, the statistics of destroying of the forest had not yet been decreasing rather increasing, particularly in the Northeastern Region, where there had been the highest rate of devastating the forest. Witnessing the statistics of BE 2504, it was found out that there were 41.9 million rais, in the Northeastern Region but remained only 13.9 million rais, during BE 2532 within 28 years. Counting from BE 2495 prior to the National Economic and Social Development Plan, the Northeastern Region had accommodated forest for 64.1 million rais or 60.3% of the total area. It counted to be the critical loss in terms of forestry resources within the short duration (Mongkol Danthanin et al, BE 2536:38) as shown in Table 2:

Table 2 Forest Areas by Regional Classification, BE 2504-2541

Forest Area B.E.	Northern (Rais)	Northeaster n(Rais)	Eastern (Rais)	Central (Rais)	Southern (Rais)
2504	72,671,875	44,315,000	13,226,875	22,287,812	18,516,250
2516	70,996,875	31,680,625	9,397,500	14,981,250	11,521,875
2521	59,235,625	19,513,125	6,898,125	12,766,250	11,001,875
2525	54,847,500	16,178,750	5,000,000	11,572,500	10,276,250
2528	52,578,750	15,987,450	4,993,899	11,053,125	9,678,125
2531	50,251,470	14,808,342	4,896,135	10,777,716	9,143,571
2532	50,138,750	14,741,250	4,866,250	10,764,375	9,125,000
2534	48,214,357	13,624,192	4,807,155	10,384,990	8,405,590
2536	47,019,480	13,420,600	4,771,202	10,254,945	8,004,738
2538	46,178,701	13,290,417	4,744,797	10,180,105	7,794,141
2541	45,660,825	13,114,948	4,692,142	10,030,312	7,578,201
Decreased rate (%)	37.16	70	64.52	54.99	59.07

*Sources: the Forestry Department: Statistics of Forest BE 2541, Forestry Department, Ministry of Agriculture and Cooperatives BE 2541*

There are many causes that decrease the forestry resources, and become current issues among the academicians who have different perspectives and concepts. Orawan Koohajaroen (BE 2535:132) splits concepts into 2 big groups. The group that sees the cause of forestry infringement is the process of the national development and the failure in the level of forestry policy, while the other group contradictorily sees that it is the growth of population in the country resulted the increasing needs of the natural consumption that leads to the infringement. Generally, the local however, has been accused of destroying the forests on the basis of agricultural expansion and the shift-plantations of the hill tribes. Nevertheless, there is one mentions about the government projects those share the destroying of the forest such as the railroad construction, road construction, large dams and reservoirs, which require large size forests in particular, the forestry monopoly of the government and the private sectors.

The rich forest where the local around spends their daily living becomes the commercial forest for outsiders who drastically change the ecological systems.

With such causes, laws have been stipulated on the closed forest and the withdrawal of the forestry monopoly nationwide. However, there are still offenders and continuous timbering. Trends of forestry resources are consistently declining and turns to be the increasing critical problems, which affect the inadequacy of the forestry resources, environmental problems, the imbalance of other ecological systems. Also, from the studies of the policy in forestry management of the past government, it is found out that authority of forestry management is under the government and through the Forestry Department and the Ministry of Agriculture and Cooperatives, which are units of managing and supervising. Such forestry and other natural resources management over emphasize biological and physical objectives as well as legality. It is also believed that there is negative relationship between the human activities and the forestry richness and totally ignoring the relationship of dependency between human and environment. Though, amendments have been later made and many laws have been stipulated still all legalities stay the similar direction that "forest" is still owned by the government and any intrusion is prohibited by announcement of being the national parks, zones of wild animal preservation, and the national preserved forest and so on. Currently, there is innovative concepts in forestry management by allowing opportunity for the local to share in the management and viewing that "human" is potential in conservation and the local is able to ceaselessly manage forest if opportunity and authority are provided.

With the stated concepts, it draws many developing countries as well as Thailand to seek ways that the civilian organization in the local to directly share the forestry administration and the management since the start as well as any allotments and benefits sharing from the forest. It requires totally integrated development process and procedures with awareness including the implementation of the principles of the community forest where the community involves in securing and exploiting. It results the zoning of the forest related to the local or the community to be the community forest, allowing the individuals in the community to share the management and securing the forest for the benefits of the community. It causes the studies and developments of the community forest in the work units and the operation

units both in the government and private sectors under the policy set by the government in promoting community people near the community forest are authorized to manage and secure the community forest. The community forest becomes the innovative idea of preservation under the key concepts that furnishing rights to community in managing and exploiting the forest, and the accepting the community course of interconnected living to arrive at learning how to mutually live dependently.

The Khok Yai forest engulfs Wapipathum District of Mahasarakham Province> It is the largest forest in the province, where the government authorizes people to share in the management of forestry benefits. There is currently 4,266 rais by area located the forest for public exploitation or the previous community forest encompassing 20 villages, and 5 subdistricts i.e. subdistricts of Nong Saeng, Ban Wai, Kaen, Dong Yai, and Khok Si Thonglang.

In the past the “Khok Yai” forest has been intruded since BE 2504 when the government announced it to be the “open-forest” for public area allowing the villagers to settle for plantations, jute, and tapioca following the policy of commercial plantation promotion. It was resulted in BE 2508 that the area of 3,588 rais has been reserved by 243 families for their living settlements. The capitalists also cornered to buy the space to cultivate sugar canes, eucalyptus trees as well as illegal trees cutting to supply fire woods to the factory for boiling the underground salt deposits in the districts of Borrabue, Wapipathum, and Nadoon since BE 2525. This caused the increasing devastation of the forest and its deterioration leading to the aridity, unseasonable rain, and continuously reducing the richness of the area as well as affecting the living of the people surrounding the forest.

With the encountered problems, it causes the villagers becoming aware of its criticality of the natural resources i.e. soil, water, forest, and environment. Groups to solve the problem has been formed by community leaders and the residents of the 14 villages residing and earning around the Khok Yai forest. In BE 2536, there has been consensus to form the network committee to conserve the Khok Yai community forest determining to secure and to rehabilitate its conditions. Ever since, it has been considered as the outstanding community for the community forest conservation. Her Majesty the Queen has conferred the royal colors of “Forest Guard to Secure Life”

on 21st November BE 2539. In BE 2542, the network committee to conserve the Khok Yai forest has been expanded to cover all the 20 villages within 5 subdistricts surrounding the forest, and to develop the master plan for the entire community forest management of the Northeastern region. The office of the network committee of the Khok Yai forest has been established to be the coordination center, the centers of the natural studies, and the local culture. The operations have well been cooperated from the people of interested living around the forest. There is clear organizational structure, action plans, and consistent activities of both conservation and rehabilitation of the forest as well as the development leading to village life enhancement for the sustainable community. At present, the network committee of the Khok Yai forest has consistently been operated to bear widespread collaborations among leaders, villagers, government and private agencies in relation to the conservation and the rehabilitation of the community forest. For examples, there are offices of network of village organizations to manage community forest among 20 villages and 5 subdistricts. There are also 3 networks for community forest conservation i.e. forests of Dong Yai, Khok Hin Lad, and Khok Hin How to coordinate the levels of province, region and the nation regarding community forest. There is network committee to plan the administration and to manage the environment, forest, and others. At present, the village organizations have registered as jurist person enabling well to assist other networks in relation to the environment.

With the background and the significance of the problems, it is observed that the “Khok Yai” forest is the last rich forest of Mahasarakham Province. It supports the living beings and the villagers in 20 villages prolong settling around the forest. It is the bank of food and medicine as well as the gigantic super market producing natural food from mushroom, bamboo shoots, vegetation, fruits, animals, numbers of insects, herbs for medication, woods for housing, fire woods, devices and so on. Had this forest been being destroyed, the communities around the it would mobilize to secure its survival for their generations to follow. It creates the strong and potential community power enabling to build networks covering this large forest. The community leaders and the villagers own advanced idea, enthusiasm, knowledge-oriented, long vision to allow every key institution in the community and everyone to share securing the forest and raising opinion to protect and survive 4,266 rai forest. It

also becomes the research resort and the educational excursion for people, communities, and both domestic and international working units.

It is stated that the community forest management by the Khok Yai community is counted as the very interesting exemplar of the involvement –oriented management sharing by people. It draws the research to be vigilant to study in order to recognize the level of involvement, factors of relationship in relation to the people's participation in the community forest management, as well as to recognize the problems, barriers, recommendations, and approaches to address the community forest. The results will be as guide in planning to promote the policy of community forest to secure the rest of forests free from devastating by the people living around and adjacent to them. Results gained from this study will be precisely and appropriately applicable to other similar social and economic conditions leading to the conservation of the forestry resources surviving to the future.

## **1.2 Research Objectives**

This research is determined

1. To study levels of people's participation in the community forest management,
2. To study the factors relating the people participation in the community forest management
3. To study the problems, barriers and recommendations in the management of the community forest.

## **1.3 Scope of Study**

This study is to investigate the participation and factors affecting the people's participation in the community forest management particularly the Khok Yai forest stratifying the people living around the Khok Yai community forest of Mahasarakham Province.

## **1.4 Research Problems**

1. What are levels of the participation in management among the people living around the Khok Yai community forest?

2. What are factors relating the people’s participation, who live around the Khok Yai community forest?

3. What are problems, barriers, and recommendations of people in the community forest management?

### 1.5 Research Conceptual Framework

#### Independent Variables

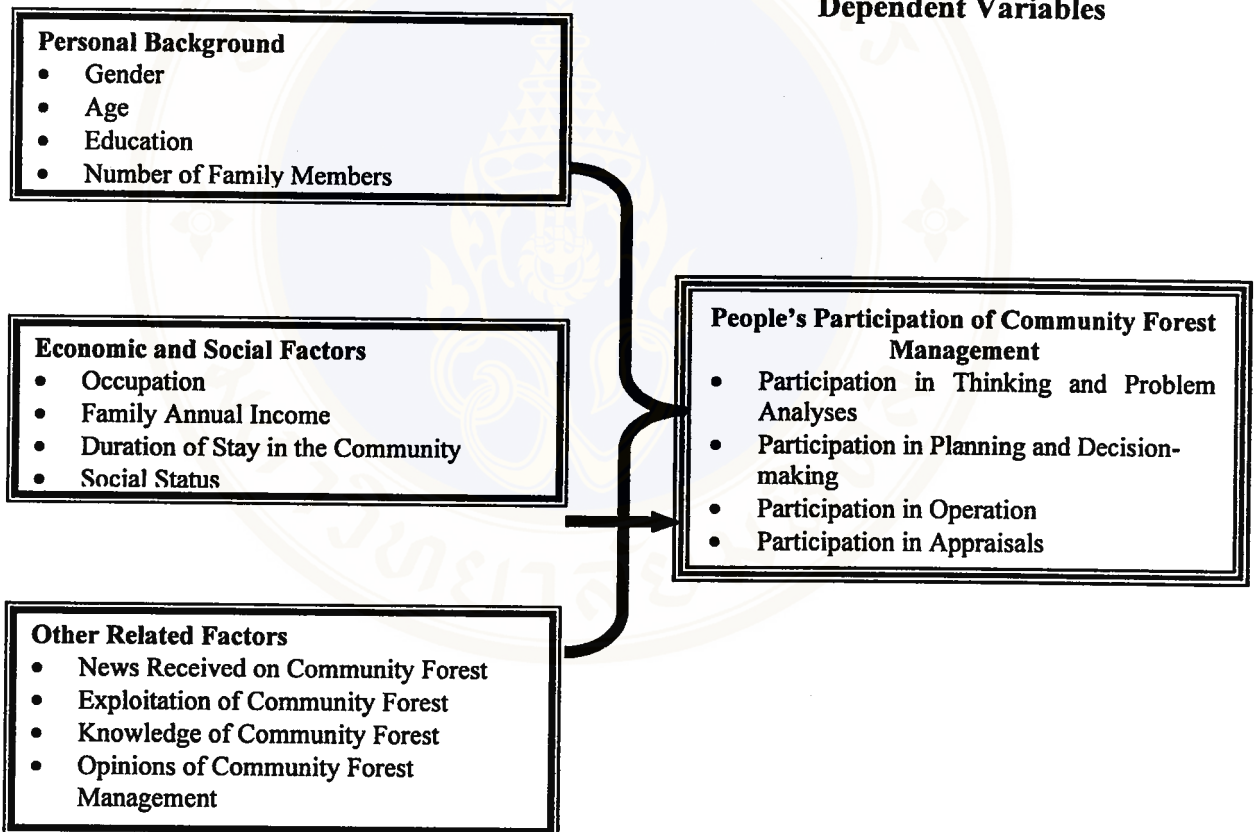


Chart 1 Conceptual Frameworks in the Study of People’s Participation in The Khok Yai Community Forest Management, Mahasarakham Province

## 1.6 Hypothesis

1. People have high level of participation in the community forest management
2. Participation of Community forest management has significant relationship with Gender, Age, Education, Number of Family Members, Occupation, Family Annual Income, Duration of Stay in the Community, Social Status. News Received on Community Forest, Exploitation of Community Forest, Knowledge of Community Forest, and Opinions of Community Forest Management at 0.05 level.

## 1.7 Definition of Terms

1. **Participation** is referred to the interest and the collaboration of people on the community forest management in the following models
  - the participation in thinking and problem analyzing, problem etiology, and alternatives of problem solving, which are referred to involvement in meeting, demonstrating opinions, and protesting key leaders if different opinions arise.
  - the participation in planning and decision-making, which are referred to attending meeting to seek problems, demonstrating opinions during planning activities related to the community forest.
  - the participation in operations, which is referred to sharing the community activities related to the community forest.
  - the participation of appraisal, which is referred to involvement in securing community forest, and pursuing the operational outcomes of projects related to the community forest.
2. **The Khok Yai Community Forest** is referred to components of the natural resources i.e. the natural plantations, all kinds of animals those all the villagers of 20 villages living around the forest are enable to exploit for their living.
3. **The Khok Yai Community Forest Management** is referred to the proper and sustainable utilization of the natural plantations and all kinds of animals such as the management, the supervision, the maintenance of resources including the

conservation, the rehabilitation and the exploitation of the resources by their necessities.

4. **The News Received** is referred to the channels of receiving news in relation to the community forest management from media, and individuals i.e. government agencies, the official authority, private agencies, Head of the subdistricts, Heads of the villages, Village Committee Board, Neighbors, mass media such as radio, television, and printed matters.

5. **The Exploitation of the Forest** is referred to bringing out the existing things of the community forest to meet the needs of the local people to reach the goals and objectives

6. **The Social Status in the Community** is referred to position, and roles of people in the locality during the meeting such as the village committee member, the committee member of the Khok Yai Community Forest, members of the Subdistrict Administration, the Head of the Subdistrict, and so on.

7. **The Communication of Information** is referred to frequency of news received in relation to community forest from individual communication such as heads of the villages, village committee, neighbors, rural administration organization and mass media i.e. radio, television, village broadcasting station, and printed matters.

8. **The Knowledge of Community Forest** is referred to the recognition of fact, truth, and data received by people in relation to community forest such as the community forest management, restrictions, and advantages of community forest through learning processes both by the formal school systems and the non-formal school systems, and the independent studies.

9. **The Opinion** is referred to expressions of belief, sensation, thoughts and discretion in relation to community forest and the management of the people's participation.

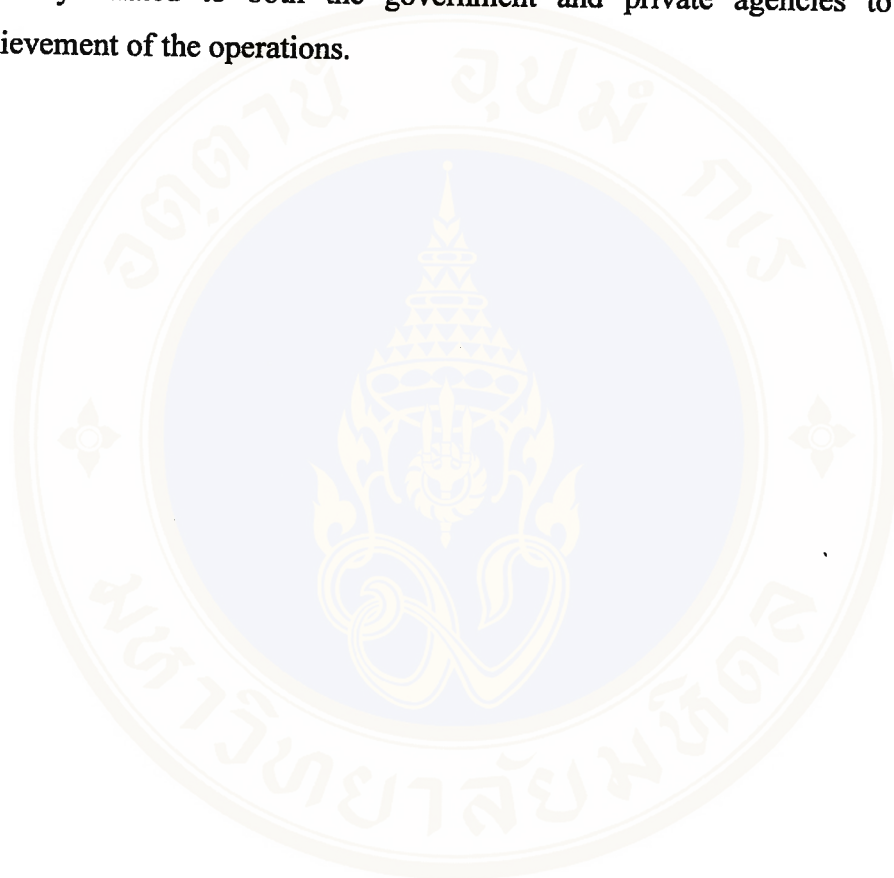
### 1.8 Expected Benefits

1. To know the levels of people's participation in the community forest management,

3. To know the factors relating the people participation in the community forest management

3. To know the problems, barriers and recommendations in the management of the community forest.

4. Results gained from this study will be applicable in planning and setting action plans of the community forest management and also applicable to other similar social and economic conditions for the people and the community including authority related to both the government and private agencies to address the achievement of the operations.



## CHAPTER II

### LITERATURE REVIEWS

This study is to investigate levels and factors related the people's participation in the Khok Yai community forest management. The researcher has studied concepts, theories, documents and related researches for the foundation in guide in the research containing the following key topics:

- 2.1 Concepts of Participation
- 2.2 Concepts of Community Forest
- 2.3 Concepts of Community Forest Management
- 2.4 Related Researches

#### **2.1 Concepts of Participation**

##### Definitions and Concepts of Participation

From the studies of documents and researches of people's participation in activities, it has been begun since human settled in community by many forms, characteristics and objectives depending to each individual and group interests. The definition of participation is therefore varied and diversified to the objectives of the involvement of each individual and group. Many theorists conclude the definition of people's participation as follows.

Yuwat Wudhimethi (BE 2536:30) defines that people's participation is referred to allowing opportunity for people to share in initiatives, discretion, collaboration, and responsibility in things, which affect themselves.

Sriphen Durongkhadej (BE 2539:17) defines that people's participation is referred to the involvement of people in administration, problem analyses, and sharing in decision - making to solve problems including collaboration of project

developments, project assessments and the stakeholder should share in every process of planning.

Erwin (1976:138) conceptualizes the definition of participation in terms of participative development, which is referred to the process that people share in the development of thinking, deciding, and problem solving for themselves. It emphasizes the serious participation of people, creative thinking, and expertise of people in joint problem solving, the proper uses of sciences, supports and pursuing the operation of organizations and their involved staff.

Koonjan Singhasu (BE 2535:16) defines the participation that it referred to either individual or group or organization of people volunteer to share in decision-making, project operating, competition, benefits and the project assessment without any obligations from outsiders and to meet the needs of the community members. It also includes being freely empowered in sharing the benefits derived from the development to all members with satisfaction and the participants also feel owning the project.

Kiattisak Ruengthongdee (BE 2536:14) concludes that people's participation is referred to the brainstorming to solve the problems of working and activities in the community to share in planning, projecting and collaborating in forms of sacrifice of efforts, donation of money and material, as well as sharing in pursuance of performance, and the maintenance of public utilities in the village. Individuals through people organization of that community might directly express the participation.

Kasinat Limsawad (BE 2543:7) studies and concludes the definition of people's participation that it referred to an individual, group or organization voluntarily share in solving problems, planning, and collaborating in form of sacrifice efforts, donation of money and materials as sharing benefits and pursuing the performance for the purpose of developing the environment or the community to reach the determined goals

Somsak Sukwong (BE 2532:43-45) divide the nature of participation into 4 types as follows;

1. Participation in decision-making
2. Participation in working
3. Participation in benefit sharing
4. Participation in evaluation

Ladawan Phorjai (BE 2536:25-26) conceptualizes the participation that it is referred to involving in occurring activities of the community worldwide. The participation is based on 3 concepts, i.e.

1. Mutual interest and anxiety
2. Mutual suffering and dissatisfaction
3. Mutual agreement for changing the group, or community to the desired direction.

However, participation might be derived from other concepts such as

1. Trust
2. Considerate of other feeling
3. Enforcement

With the definition and concepts of participation, it is observed that there are some similarities and differences. They are based on individual perceptions, experiences, educational background as well as current career. However, in this investigation, the researcher defines the people's participation that it is the people's participation in a community in thinking decision-making in solving problems of a community, and the participation in planning to solve the problem including the participation in the activities of community forest and participation in the pursuance as well as evaluating the activities or projects related and the direct and indirect management of the community forest.

### **Theories of Participation**

A participation is one of the human behaviors in societal system. This investigation is to study the level of participation, factors affecting the participation, problem and barrier of the people's participation. The researcher uses the involved theories as guides as follows

#### **The Theory of Social Action**

Parsons (1951: 279) finds The Theory of Social Action. He explains the Action of Human in the attributes of applicability to the General Theory of Action, i.e. any human actions depend on

1. Personality

2. **Social System**

3. Culture where human stays as member. The culture will determine the perception, Idea of believes, Primary of Interest and System of Value Orientation

The Social Action is divided into 3 stages, i.e.

1. *Rational* is the action properly optimized to reach the objective. Such action heads to politics, economics and social.

2. Value is also a proper action to reach the highest value of fulfilled life. Such action heads to religious ethics, and other morals to retain the social order.

3. Traditional is the unchanged action by mainly adhering to the imitation of practices since the past for action without reasoning.

4. Affective is the action that concerns about the mood and the spiritual commitment of the doer and the object, which is the goal of the action. Such action disregards nay reasons except privacy.

The social participation is therefore originated from the spirit to share in any activities to reach personal goal or the needs of the social order.

**The Theory of Social Participation**

Hay (1951:127) states that an individual social participation contains factors of the social status, economic status, occupation and residence. Those who have lower social and economic status will be less involving than those who have higher social and economic status. Similarly, the full-time farmers will involve more in the community activities than the part time farmers.

**The Communication Theory**

Roger (1971: 45) emphasizes the significance of receiving new thing and the process of communication that in receiving a new thing of an individual is depended on the communication process, which is the channel of communication and the factors related to each individual personality as details followed:

1. Personal factors are age, social status, economic status, income, land owning, expertise, and education.

2. Communication channels, and knowledge or the communication process contains the commander or the material sources, the material, the channel, and the receiver. There are 2 types of the communication channel, i.e.

2.1 Mass Media Channel is a way to transmit information related to the mass communication such as newspapers, magazines, journals, printed matters, movies, radio, television and so on.

2.2 Interpersonal Channel is the communication between each individual or the information transmitted between individuals or the message relayed between the sender and the receiver.

However, the mass communication channel is counted significant in providing knowledge, spreading news and changing individual behavior, and attitudes. Nevertheless a personal communication more influences the changes than any other communications.

### **Theory of Leadership**

Amnaj Anantachai (BE 2534: 130) states that building a leader will motivate people the willingness to work in order to reach the common goal or the objective. On the basis that the leader is means in grouping and motivate people to reach the goal. Generally, the powerful person contains both being the operative leader who is the good guide to create performance and the dynamic leader who is leading in working and its progression, and activating. Also, there is ineffective leader who creates no performances. Results in implementing theory of leader building leads to the mobilization of collaboration with high morale, quality job, creativity, and shared responsibility. Building good leader is therefore leading to the participation in societal activities for achievement under the group policy.

With the above stated theories, it enables to conclude that understanding leads societal activities for the social to participate in its activities underlying with life style, values, customs, individual attitudes and appropriately developing the stimulus to lead to having community members sharing its activities in forms of voluntary participation. Also, having the community members sharing social activities, there are factors of both facilitating and to hindering the participation, particularly in concerns with well living, economic conditions and social status. If community members are

well living and with wealthy economic conditions, they find more time to participate. At the meantime, the communication will influence and affect the broadening of knowledge and an individual changes of attitudes where it will lead to the understanding and the clarity in relation to information for the member to decide in more participating the community activities. It is likely called the stimulus factors where action requires a leader to mobilize assistance and collaboration, having creative thinking and sharing the responsibility.

The researcher therefore finds that the study of people's participation in the management of the Khok Yai community forest by implementing the theory of participation stated above will gain the clearer answers and explanation of the phenomenon in relation with the local people's participation.

### **Models and Procedures of Participation**

Akin Rabhibhat (BE 2537:100-101) recalls the nature of community participation that it can be divided into 2 natures, i.e.

1. *Models of Participation*: it is such as participation of activities with the sense of not to hurt others feeling or by being forced under the face to face arousal, or the participation with well understanding of the activity objectives that arouse the participation seeing that the activity will long-term benefit oneself and the community.

2. Time Span that community individual shares the activity by dividing the participation into:

- 2.1 scanning the problems, its causes and solutions
- 2.2 decision-making of approaches and planning the development of problem solution
- 2.3 operating the development activity as planned and evaluating the development activity

There are many persons who discuss the procedures of participation, such as

Pairat Techarin (BE 2527:6-7) states about the procedures of participating in job to achieve objectives and policy of the development that they contain:

1. Participating in scanning problems and their causes arisen in the community as well as the community needs.
2. Participating in thinking, structuring, forming and developing methods to solve community problems and for the purpose of seeking initiatives for community benefits as well as meeting the community needs.
3. Participating in planning policy, action plan or project or other activities to solve problems
4. Participating in decision-making to use the restricted resources in order to gain the highest returns.
5. Participating in organizing, and improving the development management systems for better effectiveness and efficiency
6. Participating in investment of community activities to each individual and unit affordability
7. Participating in following the policy plan, project and activity to achieve the goal
8. Participating in controlling, pursuing, evaluating, and maintaining project as well as activities arisen in the community either by private or government agencies for lasting benefits.

It is observed that the procedures of participation of Akin Rabhibhat is similar and relevant to the concepts of Pairat Techarin

However, Jermsak Pinthong, Cohen and Uphoff have similarly divided the procedures of people's participation, i.e. Jermsak Pinthong (BE 2534:272-273) has divided the people 's participation into 4 procedures as follows:

1. Participation in scanning problems and their causes or the rural
2. Participation in planning and implementation
3. Participation in investment and operation
4. Participation in pursuing and evaluating performance

While Cohen and Uphoff (1977:7-10) similarly divided participation into 4 steps as follows:

1. Participation in decision-making
2. Participation in project operation
3. Participation in benefits

#### 4. Participation in evaluation

With the concepts of models and procedures of participation, it is observed that their natures are similar except come minor details. Therefore, in this study, the researcher has initially determined the research framework of the nature in relative to the people's participation of the management tin the community forest to cover the problem conditions of the locality as follows:

1. Participation in thinking and problem analyses
2. Participation in decision-making and planning
3. Participation in operation
4. Participation in pursuing and evaluating performances

#### **Factors Affecting Participation**

In the investigation of people's participation, there are many studies since the past. Also, they are found out by many theorists and academicians that there are many factors affecting people's participation collected by the researchers in relative to documents, and research papers to investigate the people's participation of Khok Yai community forest management as follows:

Niran Jongwuddhiwes (BE 2527:184) mentions that there are 3 factors affecting people's participation, i.e.

1. They relate to Ego-involve and Task -involve
2. There is the coordination to reach the group purpose and there is communication interacting among the group.
3. There is the responsibility with the group on both success and failure. It is the sensation of bond to work and trust.

William Reader (1974: 39-53) concludes the 11 factors affecting people's participation as follows:

1. Behaving to follow the fundamental belief, i.e. individuals and groups are likely selecting practices corresponding and similarizing to their own fundamental believes.
2. Standards of values - individuals and groups are likely following their won corresponded standards.

3. Goals of individuals and groups are likely leveraging prevention and protection of their own goals.
4. The strange experiences and behavior of individuals and groups are sometimes based on bias experiences.
5. The expectations of individuals and groups will follow their own expectation to such situation including likely to treat others in the style they expect from other.
6. Self-reflecting: individuals and groups are likely to perform things by anticipating such performing.
7. Oppression: individuals and groups are likely feeling being oppressed to do things.
8. Conduct and tradition: individuals and groups are likely to perform things habitually when being involved in the situations.
9. Opportunity: individuals and groups are likely to participate in forms of social action, particularly those involving with numbers, and type of opportunity where social structure allows such participation in so far as owing to their perception.
10. Ability: individuals and groups are likely to participate in some activities perceiving by persons that they are needed to do in such situation.
11. Support: individuals and groups are likely to start working when being supported for such deed.

Alvin (1958: 147-157) states about factors initiating participation, which are gender, age, social status, education, occupation, domicile, duration of stay in the locality, number of members in a family, family nature, and social values.

It is observed that factors involving people's participation of Alvin's, William Readers', and Niran Jongwuddhiwes' are similar but likely different in perspectives and valuing the factors. For example, Alvin prioritizes the external factors that they affect the participation i.e. gender, age, social status, education, occupation, domicile, duration of stay in the locality, number of members in a family, family nature, and social values. Niran Jongwuddhiwes and William Readers prioritize the internal factors such as fundamental belief of oneself, standards values of individuals and groups, expectation of individuals and groups and ability of individuals and groups and so on. It counts to cover individuality of a person – body and mind.

In the investigation of people's participation in the management of the Khok Yai community forest, the researcher has selected the concepts of Alvin. The qualitative factors have been following the concepts of William Reader to explain factors relating people's participation in the stated locality.

### **Measurements of Participation**

Bertnard A, (1985: 144-147) states about the measurement of participation, which Chapin, F.S. has formed to measure the social participation by differently scoring the principles of participation, e.g. 1 score for being the member, 2 scores for a participation, 3 scores for funding, 4 scores for being committee member, and 5 scores for being the chairman.

R.E. Kasperson and Brietbat (1985: 36) propose 3 levels of measurement, i.e.

1. An Individual Performance, which is not the group performance that will mislead the analysis and conclusions since each individual expression in the participation process, will identify individual values, perception, and behavior. It is to say manners counted in the participation is the manners directly expressed toward outcomes of the individual performance.

2. The Density of the Performance - it is expressed by frequency of participation, duration of the activities, the commitment, and the motivation in doing.

3. The Quality of Participation – it is witnessed by the evaluation of outcomes and affects of the initial performance such as responsibility, decision-making, the openness of acceptance, ability, and comments.

In this investigation, the people's participation in the management of the community forest is involved with expressed behavior of people in participating with activities in the community forest management. To what extend do people act or express relating to shared activity concerning sharing in community forest management. Whether will people who do not express relating to shared activity not participate in the community forest management.

## **2.2 Concepts of Community Forest**

### **Definition of Concepts of Community Forest**

The “Community Forest” is the way to enhance the preservation of forestry resources in the new dimension of the ecological relationship between human and forestry resources presented by the cohabitation between community and forest, which is the course of living since previous ancestors accepting that the community understands forest through learning the criteria and particulars in the context of shared benefits. The ‘Community Forest’ reflects peaceful cohabitation and genuine mutual dependency between human and forestry resources, which leads to many definitions as follows.

The Forestry Department (BE 2537:2) defines that it is the forest where people or people group or community institutions share to maintain for the benefits of the community or in forms of management to adopt the factors of community needs and people who gain benefits to share in the community.

Ampai Siriluck et al (BE 2538:26) define the community forest that it is the forest where people, people group, and institutions in the community share the reforestation and securing the benefits of their own community. The community forest is the concepts, which prioritizes local economy in forest management where the local citizen directly shares. The community forest is the area where it is determined for the community to manage and to allow the community to sustainably exploit under the rules drawn by community significantly corresponded with believes, and cultures of the local people.

Komol Preakthong et al, (BE 2535:137) define that the community forest is the area allocated or determined for the community to manage so that the community should sustainably exploit under the rules determined by the community and it must significantly correspond to the belief and culture of the local people.

It is observed that the definitions of the community forest correspond and similarize that it is the forest where people and people group or the institutions in a community share reforestation and securing for their own benefits. It is also contains models of shared management and meeting the people needs and their interest so that the community shall sustainably exploit.

Amnuay Korvanit, (BE 2528:10) explains that the community forest is referred to the natural forest or the built forest for that community to mutually exploit under the purpose of community development to leverage their earning. The

government officials entering should be well settled with the villagers, surveying the economic and social conditions of the village, the community leaders, and the location for community forestation should public land. The plantation seeds should be fast growing for rapid end results to build the morale among people. The workforce in forestation should be villagers to cultivate awareness of ownership and the benefits sharing from the forest should be in form of corporate, or the village committee or the Tambon Administration Council the handle benefit sharing.

Kasinat Limsawad (BE 2543:22) concludes the definition of the community forest that it is referred to any activities related to forest done by the local citizen or within the locality where they are residing in group, sharing the methods of management in the existing forestry resources emphasizing preservation and protection to gain production and the benefits from the forest both directly and indirectly. It is to initiate the richness and the sustainability of the forest as well as villagers can share benefits with fairness, equality and covering all benefit sharing dependency without deforestation and still keep forestry richness and sustainability.

With the statement of the above, it is concluded that the “community forest” is referred to the forest which uniquely connects to the community and its people. It is the social process that the local people unite to claim rights in management. Supervision, and the maintenance of forest as well as the preservation, rehabilitation, and the necessary exploitation including the sustainability of the forest principally based on the community forest management is up to the community, by the community and for the community

The purpose of the community forest is to allow the local citizen unites or groups for the management in order to develop the forest where they are residing. It is to build the sensation of ownership for the highest production and benefit sharing dependency with fairness, and equality emphasizing preservation without deforestation as well as keeping its richness and sustainability.

There are many different observations. However, 3 significant natures of the community forest can be concluded as follows:

1. In relative to the rights of the community to exploit the forest whether directly such as wood uses, and the natural products, or the indirect benefits such as the water origin for agricultural uses, it is emphasized on fairness of uses in the

community. In forestry exploitation, agreeing to share rights between the community and the government in the resource exploitation, which is counted the detachment of monopoly of the state.

2 The management of community forest by ways of the community: With these concepts, it is accepted that the community is potential to secure the forest for its rich products. It is the basis that the prolong life style and belief of the community toward the forestry resources are clear to find factors to secure the forest. Till present, the attractiveness of this approach is the acceptance that the community can share the role in securing the forest after the failure in policy of securing forest set by the government. Such failure drives to turn for reviews, to seek ideas, and previous community intellect, which is coexisting and lengthily learning about forest and being adapted into ways of life enabling to secure the forest till present.

3. The drive for attempts: preserving forest in the community way is the new dimension of the preservation process in the state of present social development to cohort the condition of the environmental problems and the inadequacy of the natural resources that all parties should share to solve the problems. The acceptance of the preservation principles in the primitive ways of the community is counted to enhance the participation of the villagers to share the role in preservation to secure the local resources.

Whereas the concepts of the community forest management, which has been studied from document, related to the community forest management in Thailand, there are many concepts to each social context. In this investigation, the researcher has used the concepts of Komol Preakthong et al., which is similar and corresponding to the economic and social conditions of the locality where the researcher has initially studied, i.e.

Komol Preakthong (BE 2537:1-12) conceptualizes that the community forest management can be developed on the 4 basic concepts as follows:

1 The Ecological Concepts, which accept that human is part of the ecological system and the management to balance ecology should be heading for human dwelling and the dependency of the ecological system without deecologizing.

2. The Concepts of Community Development in the Rural, which agree that the activities of the community forest affect the community development in the

rural to allow them to stand the living on the basis that there are many forms of the dependent resources for the rural such as water resources for agriculture, uses, and spiritual supports born from the heritage of belief and tradition. The life style of the rural and the way of securing forests as well as the exploitation are different. It counts to be the local knowledge and experiences, which are deserved reinforcement to develop the rural. The activities related to forests are therefore facilitating the living style of the people in the rural. It deserves to share with other development activities for the survival of the community in the rural and their self-development.

3. The Concepts of Decentralization, which empower the forest protection from being implemented by the state agencies to be the shared securing to more directly facilitate communities located surround it. IT is also emphasized the decentralization to become serviceable for people directly meeting their increasing needs.

4. The Concepts of Exploitations for the forestry resources is the productive resources, and enabled to be managed for consistent benefits. Reason is that forests are the natural resources facilitating human in many ways such as used woods, water absorption sources, retreat and rest areas, and the center of curing and controlling the natural balance between life and non-life. If the proper management has been imposed the “forest” is exploitable to community locating near the forestry resources.

With the studies of Wiyuth Jamrasphan et al (BE 2535:7-8) thy conceptualize the community forest that it is the concepts referring to the relations between the forest and community that the community way of life depends on the forestry resources. Reasons are that it is the source of food and its herb can cure diseases, and the community people can use wood for home building. When deforestation has been made it is therefore the community necessary things are reducing, which directly affects the community way of life. Communities have developed mechanisms of the relation between forest and the community for the purposes of many forms in forestry exploitation such as the appointment of the committee or the preservation group to secure the forestry exploitations. In some communities, there is belief system to the key person in the community resource management on the basis that every community has it s own economic, social and cultural structure, which drastically

share the role in determining relationship and the forestry exploitation of the people from the community. The concepts of community are therefore emphasizing the role of people in the community in relation to the forest exploitation management to meet the needs of every member in the community. With the stated basic concepts of the community forest, there arise many definitions.

### **Models of the Community Forest**

The community Forest can be divided in many models and forms; it is mainly based on the objectives of the persons who study. So, the Forestry Department (BE 2537:35) has classified 3 models of the community forest by objectives for the benefits and the exploitation of the community, i.e.

1. The Preserved Community Forest - it is the course of operation in the style of preservation in relation to environment, soil, water, and others. The prevention of the natural casualties, the belief and the local traditions are mainly found with the large natural forest. Some forests have been planted aiming at being the water origin, water absorption for utility, drinking and agriculture. It is the place for religious practices and other rites of belief, the recreation areas, the natural food resources, herbs, firewood and so on. The nature of the preserved community forest are the water absorption forests, paddy-field end forests, the forefather spirits forests, cemetery forests, church forest, pardon and alms forests, school forests and so on.

2. The Economic Community Forest – it is the model of the end-results operation and economic remuneration in form of tree and forestry products. It is found sometime the forestation but sometime in the natural forests. The objectives are to be the source of income for the community such as food searches, and forestry sources, and herbs. The nature of the economic forest is such as utilized forest, the planted forest, and so on.

3. The Multipurpose Forest, which is another way of the community forest management for the benefits of returns informs of the preserved and economic forest containing the natural forests and the planted forest by objectives to gain at the same time the benefits from the community forest of both models.

To distinguish the models of the community forest by objectives in securing the forest, Komol Preakthong (BE 2537:15-16) has divided into 2 models, i.e. the earlier community forest, and the developed community forest as following details

1. The Earlier Community Forest is the area of the community forest where people have secured for the following purposes

1.1 To secure the forest for traditional rites such as the securing the forests of the forefather spirits in the northeastern region, or the securing the cemetery forest in the northern region, which follows the local traditions for the ritual practice. Such forests will be secured and freed from deforestation.

1.2 To secure forest as the water absorption sources for the agriculture or for the prevention the soil erosion to bring sand into the paddy fields. The water absorption forests are found in the hill tribe community where there are paddy fields such as the Karen and the Thais living in the plain. The water absorption forests will be well secured on account of not only being the absorption sources but also the sources for foods, herbs and other forest products.

1.3 The preserved forest for hunting free to follow the principles of Buddhism, which is accepted that trees will not be cut but kept for shedding and the dwelling for animal as well as the spiritual abodes and retreats for human. They are mostly found in Buddhist temples in the regions nationwide.

1.4 The preserved area for retreats, which is focused on securing the forest to its nature. Such forests contain attractive sites such as waterfalls, which are kept as common goods for all where everyone in the village to seek retreats and leisure.

1.5 The preserved area for food sources, and utilities for exploitation, which are mostly found near the villages and where they leverage earnings for people living close to them.

2. The Developed Community Forests, which are resulted from the encouragement of community forestation for the villages for the purpose of being the resource where villagers can count. On the basis of forestry inadequacy or the deforestation, which are ill facilitated, the new developing communities will be diversified to the uses of soil and the institutions involved are

2.1 The utility community forests, which are cultivated within the areas in the village for wood exploitation such as firewood and charcoal, and so on.

2.2 The school forests, which are planted in schools for educating and distributions to gain income for lunch funds to the poor students.

2.3 The temple forest development, which is the plantation of trees in the temple vicinity or the monk monastery for shedding and proper for the peacefulness of mind as well as the wood exploitation in the temple activities during the religious festivities.

2.4 Sparing 20% of the housing project to be the community utilized zone under the consensus of the Board of the National Soil Management.

2.5 Rearranging the national forests to be the community forests by following the consensus of Board of Land Development 4/BE 2530, it is permitted the forest of not more than 500 rais and detached to the national preserved forest, the national park, the wild animal preserved zones, and the community forest zones to be under the security of organization established by villages, and subdistricts such as the village committee, and the Tambon (Subdistrict) Administration.

The objectives of exploitation with the Khok Yai community forest, where investigation is conducted are the integrated forest for the communities. Its model of operations is to yield the returns of both preservation and economy. The forest contains both natural plants and the forestation so as to gain benefits of both models from this community forest.

By views of securing the forest areas from the studies on the Khok Yai forest records, it is found out that people determine to secure the forest as t origin. Later the government has set the policy of open-forest, which lead to the deforestation by villagers for their exploitations and some activities stated. Its richness has been devastated and deforested. The Khok Yai community forest has been improved to be the community forest by the activities of the community, the government and the private sectors with assistance and consultations. The key leaders are the 20 village committees located around the forest. It is currently counted that the Khok Yai community forest is the integrated community forest between the community forest of its origin and the developing community forest. It contains forest of water sources of

the past, the forest for ritual practices, the monk monasteries, and the newly exploited areas by forestation. Areas and exploitation are clearly segmented with criteria encompassing the attachment of the traditional heritage and new intent initiated by 20 villagers and their committees living around the Khok Yai forest. They also for the network committee to preserve the Khok Yai community forest as witnessed in present.

### **2.3 Concepts of Community Forest Management**

#### **Definitions and Concepts of the Community Forest Management**

Studying the concepts of the forest preservation, which is believed that it cannot be, separated human's course of living. The preservation process is focused to reinforce human to share in such area particularly, people living in the forest area and its surrounding. Banchorn Kaewsong (BE 2540:14) has stated and it is corresponded to the current concepts, which are accepted by forestry academicians both domestically and internationally that it is the new concepts in the management of the forestry resources allowing the local people to share in the forestry management. With the stated concepts, those developing countries as well as Thailand are seeking approaches to organize the local people participating in the forestry administration and management.

There arise many definitions of forestry management of both differentiation and similarity in relation to details. However, in the investigation of the Khok Yai community forest, the researcher has implemented the definitions and concepts of the forestry management which are relevant and adhering the context of the community investigated to be as guide as follows:

The Forestry Department (BE 2532: 91-92) defines that the community forest management is referred to implementing the forestry knowledge and other disciplines to organize the forestry resources where the local people have participated in preservation and forestation enabling meet the actual needs of the community.

Saneh Jamarik et al (BE 2536:201-204) proposes 4 approaches in the management system of the forestry resources as follows:

1. Planning the resource management is the classification of the forest for exploitation such as the preserved forest, the water absorption forest, the eater origin forest, the paddy field forest, the temple forest and so on.

2. The allocation of the resources is the allocation of the forests by their natures, which is divided into 2 natures, i.e.

2.1 The exploited forest such as the allocation of firewood woods for construction, and wood for distributions and so on.

2.2 The preserved forest and the restricted areas such as the permits for collecting forest products, bamboo shoots, mushrooms and herbs

3. Setting criteria and controls to follow the community regulations, which contains:

3.1 Organizing the structure and roles of the community organizations

3.2 Regulating each forest territory

3.3 Imposing conditions of soil and forest development

3.4 The preservation, protection and the exploitation of the community

4. The ratification of rights over the resources, which contains many levels:

4.1 Ratifying by the government

4.2 Ratifying by the net work

4.3 Ratifying of the exploitation by the community

Kasinat Limsawad (BE 2543:22) concludes that the community forest management is referred to the securing and sustaining of the forest for the community, which will reflect the sustainability in the forest management of the people containing the exploitation of the forest areas, regulated by the people organization to handle the community forest in order to achieve the objectives. It is supported by the external organization in relation to knowledge and the strength of operation of the village organization to enable managing the community forest in order to reach the set objectives and goals of the management.

Therefore, at present, there are studies and development of diversified models in the community forest management. In the models of management, it is the

consequences of the acceptance as common areas for the village, the consequences of the group or people organization strength who guard the forest, and the consequences of rules setting as well as the control to follow the rules and the fining when there is offending, which signifies the endurance of securing the forest for the community witnessed in the Khok Yai community forest.

### **Inherent Conditions and the Achievement of the Community Forest**

Saneh Jamarik et al (BE 2536:135) states that the achievement of the community forest is gained from 8 essential conditions, i.e.

1. There is the strong community, i.e. besides being communally located but also the close social relation among community members. The awareness of community is likely reflected by belief, idealism, the attached rituals and the common practices such as the dinning rites for the Water Master spirit, the rite to propitiate the Great Grand Father spirit and so on.

2. There is the fertility of likely rich soil, water and forest or in the state of sustainable rehabilitation. Resources of soil, water and forest are relatively tight with the agricultural products. The physical nature of the community, which therefore contains the awareness to secure the forest, should own the resources of soil, water and forest to facilitate the agricultural products of the community.

3. There is benefit sharing. The preservation of benefit sharing is based on the daily exploitation of soil, water and forest for agriculture and forest products such as the source of food, wood for home building, firewood and other forest products.

4. There is the awareness to secure forest, which is not only strong but also deeper than the benefit sharing that cover the idealism, belief and rights protections of community and the rights of nature in being human not to be intervened from the outsiders. The awareness to secure forest is likely spring from many conditional factors such as customs, belief and the continuity of the idealism reproduction, the necessity in the protection of the community ecological balance, the problems of drought, or the monopoly of the forestry, and the competition of resources with the neighboring community.

5. There are both a community leader and the official leader who are strong and high intelligent on account of the leader enables not only to control and to keep rules and regulations of the community but also to adapt local intelligence, customs and traditions well settled with the changing political, economic and social conditions. Besides, the key character of a leader is to work on the basis of securing the community benefit by adhering to the principles of for the common good.

6. The people organization is instituted either by the tradition or by state allocating the proper staff to fairly handle the resources under the diversified conditions in areas of ecology, economy, politics, social and culture of each locality. The works of villagers are based on the ancestral intelligence; customs and traditions as well as experiences hereditary accumulated.

7. There are traditions in using resources counting as common rights and property of the community. In the past, there have been traditions of resource management that all natural resources were the common property of the community and the community hold the rights to manage, to regulate in controlling the exploitation. The community that could secure the forest is usually adhere to the tradition that the forest is only for the community that secures it and deserves the rights in exploitation. Also, the community holds rights the enduring and fair management for all community members.

8. There is the sustainable and fair system of resource management in the community containing the principles, methods, and models under the bases of

8.1 Accepting the community traditions and rights

8.2 Contemplating the common benefits of members and social fairness

8.3 Lasting production system and the ecological balance

8.4 Participating of all community members.

### **The People's Participation of the Community Forest Management**

Dusit Vejjakit ( BE 2535:15) states about the process of the people's participation that it is referred to allow opportunity for the local the collaboration, the coordination and the responsibility in their local development to meet their needs by being appropriately supported from involved units. The people's participation is one



of the most significant approaches in the rural development in terms of planning from the lowest level. Also, the community forest is counted as one of areas in rural development that people must participate in order to reach the achievement.

Sriphen (referred in Sombat Phimprasit, BE 2543:16) states about the people's participation in the community forest management on the basis that the local people is depending on the forest. They should better know its values than others and be able to supply information in relative to the diversities of forestry resources, the location of different resources in the forest, the existing forest condition, principles and method of exploiting forest, and the management of preservations for the lasting of the forestry resources. With these concepts, the local people are suitable for securing and managing the forest within their community. Methods are up to each community depending on the conditions and the resources of the forest and what attitude the community have regarding the forest dependency and among the local people. The community forest management requires local people to be the key manager and the local people will collect data of the community as well as the forest products in terms of the natural resources, economy, and social. They are persons who analyze the problem, contemplate the optional solution, and plan to manage the community forest for its lasting.

#### 2.4 Related Researches

To be as guide in this investigation, the researcher has studied many research works on related factors as follows:

Somma Kitiyakul (BE 2542:Abstract) studies factors influencing the people's participation of the preserved areas of the Sruay River in Chiangrai Province. It is found out that the male have more participation than the female. The farmers have more participation than the occupation of plantation, orchard, raising animals, trading and others. The high-income persons have more participation than the lower income person. The persons of more prolong duration of stay have more participation than the person of recent stay. More receiving information of preserving the river play more participation than the less receiving information. Being member of more social groups has more participation than not being the member of any social group. More knowing how to preserve the natural resources participates more than the less knowing.

Wimolrat Srisingh (BE 2538: Abstract) studies the participation in preserving the natural resources of the female group in Kanchanaburi. It is found out that the participation in preserving the natural resources is moderate. The activity participated most is the operation, whereas the relationship of participation and the investigated variables are found out that duration of stay in the locality, and the supports from husband have statistically significant relationship with the participation in preserving the natural resources at 0.05 level.

Kasinat Limsawad (BE 2543: Abstract) studies the participation of civilians in preserving forest and the dependency of the Khok Sa-ad community forest, Tambon Sakae-prong, Amphoe Muang, Buriram Province. It is found out that factors affecting the participation in preserving the natural resources are being the group member, knowing how to preserve forest, information receiving, and benefit expectation. Factors affecting dependency of the community forest are age, number of workforce in a household, occupation, and income.

Phaijit Traiwongyoi (BE 2538: Abstract) studies the people's participation in the community forest management: a case study of Ban Pa Lon, Tambon Pong Nong, Amphoe Mae Jan, Chiangrai Province. It is found out that people in the village have moderate participation in the community forest management. Factors most influencing the people's participation the community forest management is perception and forest ownership awareness of the community. The second is the information receiving of the community forest, the forest exploitation, and area of land for earning, respectively. It is further found out that gender, age, being group member of a community, knowledge of community forest statistically make significant differences in the people's participation of the community forest management at 0.01 level.

Supharaporn Dhammachat (BE 2542: Abstract) studies the local people's participation in preserving the onshore resources: a case study of Amphoe La Ngoo, Satun Province. It is found out that most samples moderately participate in preserving the onshore resources. Factors affecting the local people's participation in preserving

onshore resources are gender, age, perception and the information receiving. However, education, social status, and duration of stay in the locality have no affect against the local people's participation in preserving the onshore resources.

Suphot Phongphisuddhibuppha ( BE 2543: Abstract) studies the civilian's participation in the preserving the community forest under the directions of monk: a case study of the Wat Chollapradhan Dhamri community forest, Tambon Soong-nern, Amphoe Kra-sang, Buriram Province. It is found out those factors relating the participation in the preserving the Wat Chollapradhan Dhamri community forest are age of household head, and income of the household. The level of knowledge and understanding in forest preserving of the household head has statistically significant effects the participation in preserving the community forest.

Chairoj Dhanasanti ( BE 2535:Abstract) studies the participation of the Tambon Council Committee in the natural preservation: a case study of Ubonratchathani Province. It is found out that the Tambon Council Committee has moderate participation in the natural preservation. The different factors of duration of stay in the locality, status in the Tambon Council, piece-of -land ownership, frequency of information receiving, being the committee member involving in the preservation of the natural resources, being trained in the preservation of the natural resources have statistically significant differences in the participation in preserving the natural resources at 0.01 level. However, The different income has statistically significant differences in the participation in preserving the natural resources at 0.05 level.

Chuenjai Buchadham (BE 2542:Abstract) studies the participation in preserving environment of the tourism operators in areas of Bang Saen Beach, Chonburi Province. It is found out that the tourism operators have moderate to high participation in preserving environment. Factors in relation to duration of operation, type of business, relation with the community leader, and being trained in environmental preservation have relationship with the participation in preserving environment. However, the gender, age, education, domicile, receiving information of the environmental preservation, and knowledge of the environmental preservation have no relationship with the participation in preserving environment

Panida Wimarnrat (BE 2543: 108) studies the participation of members of the Tambon Administration Organization in Relative to the Environmental Preservation: a case study of Bueng Borra Petch, Nakhonsawan Province. It is found out that there is low participation of members of the Tambon Administration Organization in Relative to the Environmental Preservation of Bueng Borra Petch, Nakhonsawan Province. Factors in relation to education, key occupation, training, perception of information, status within the Tambon Administration Organization have statistically significant effect the level of participation at 0.001 level. The exploitation of the Bueng Borra Petch has statistically significant effect the level of participation at 0.01 level. The knowledge of environmental preservation has statistically significant effect the level of participation at 0.05 level. Whereas, there are no statistically significant effects in relative to age, average monthly income, duration of positioning, and duration of stay in the locality.

Pisan Dhanasarn-somboon (BE 2542: Ngor) studies the local people's participation on the environmental preservation of Arts: a case study of Si Chang Island, Chonburi Province. It is found out that most of the local people has low participation on the environmental preservation of Arts. Age, domicile, Arts values, and knowledge of the environmental preservation of Arts are factors significantly affect the environmental preservation of Arts at statistical level of 0.05

Pisit Boonchai (BE 2528:Abstract) studies the participation in forest preservation of the Tambon Council Committee: a case study of the Lower Northeastern Region. It is found out that most of Tambon Council Committees of the Lower Northeastern Region have moderate participation in forest preservation. Factors affecting the participation of forest preservation are status of the Tambon Council Committees, information of forest preservation received from mass media, economic status, and the procurement of fuel in household cooking.

Walaiporn Dow -suwan (BE 2533: Abstract) studies the local people's participation of the environmental preservation of Bueng Khun Tha-lae. It is found out that there is low local people's participation. Besides, there is weak knowledge and understanding of the environmental preservation of Bueng Khun Tha-lae. The different factors of residential sources, gender, economic status, occupation, social status, information receptivity lead to statistically significant difference in relative to

the participation of the environmental preservation of Bueng Khun Tha-lae at 0.01 level. At the meantime, education, duration of stay in the locality, and the exploitation of Bueng Khun Tha-lae; are not affecting the participation of the environmental preservation of Bueng Khun Tha-lae.

Sopsook Leelabutr (BE 2543:99-100) studies the local people's participation in the environmental preservation: a case study of Kor Kred, Nonthaburi Province. It is found out that there is moderate local people's participation in the environmental preservation of Kor Kred. Factors statistically affects the participation in the environmental preservation at statistical level of 0.001 are gender, occupation, social status, and the knowledge of the environmental preservation. At the meantime factors do not statistically affect the participation in the environmental preservation at statistical level of 0.05 are age, education, income, perception and information receptivity of environmental preservation

Udom Yaemchuenphong ( BE 2537: Abstract) studies the participation of the Tambon Council Committee in relative to the water sources preservation of Tha Jeen River, a case study of Tha Jeen River under the jurisdiction of Nakhon Chai Sri district. It is found out that there is low participation of Tambon Council Committee in relative to the water sources preservation of Tha Jeen River. Factors of being village scout member, being cooperative group member, and frequency of exploitation for fishery, significantly affect the water sources preservation of Tha Jeen River at statistical level of 0.001. Being volunteering member, being member of agricultural group, and the exfoliation of water for fishery significantly affect the water sources preservation of Tha Jeen River at statistical level of 0.01. Being member of education committee, being member of circulated fund, ownership of land, and frequency of using eater for raising animals, are significantly affect the water sources preservation of Tha Jeen River at statistical level of 0.05. At the meantime, factors of age, number of family members, duration of position, key occupation, and annual income of the Tambon council Committee have positive relationship with the participation of the Tha Jeen River preservation.

Ium-porn Phoonkwan (BE 2543:99-100) studies the local people's participation on the environmental preservation of Arts of Pra Pathom Jedi, Nakhon Pathom Province. It is found out that there is moderate local people's participation on

the environmental preservation at scoring 66.10%. The second is high local people's participation on the environmental preservation at scoring 16.10%. Levels of people's participation are significantly related to factors of income, the knowledge of preservation, duration of stay in the locality, information receptive behavior at the statistical level of 0.05. At the meantime, factors of gender, age, education and frequency of entry into the Arts resources have no relationship with the local people's participation in the preservation.

### **Conclusion**

From the studies of the concepts, theories, and related researches of the people's participation, it is found out that there are some factors relating to people's participation such as gender, age, education, occupation, income, duration of stay in the community, information receptivity, benefits, knowledge, perception and so on. The researcher has therefore implemented concepts, theories, and related researches as stated above to be as guide in conducting this research and determining the research questionnaire.

## **CHAPTER III**

### **RESEARCH METHODOLOGY**

A survey research and qualitative research by using questionnaire and in-depth reviews in data collection have been used in this investigation. In additional details, the researcher has studied from journals, textbook, research papers as well as related researches to determine approach in the study, data collection and data analyses as follows

- 3.1 Population and Samples
- 3.2 Research Instrument and Its Quality Development
- 3.3 Data Collection
- 3.4 Data Analyses

#### **3.1 Population and Samples**

##### **A Survey Research**

The population in this investigation was ones who lived and earned living in areas of 20 villages, in 5 tambons around the Khok Yai forest Wapeepathum District, Mahasalakam Province of not less than 1 year. Prior to data collection, the researcher has used household-based and there were 1,667 homes. In sampling the household head or the spouse in case of the household head absence or a representative member at the age of not less than 18 years from each family. The sample size was gained and represent the population by using the sampling method of Taro Yamane (referred in Boondham Kijpreeda-Borrisood, BE 2535:68) determining the sampling error at 0.05

**Calculation**

$$n = \frac{N}{1+N(e^2)}$$

whereas

N = population

n = sample size

e = sampling error at 0.05 level

$$\begin{aligned} \text{Samples} &= 1,667 / (1+1,667(1,667(0.05)^2)) = 322.59 \\ &= 323 \text{ households} \end{aligned}$$

To find more reliability in research, the researcher has added another 10% to the sample size. Therefore, there are 360 samples in this investigation to represent the Khok Yai forest population containing 20 village within the 5 tambons. Sampling has been made from 20 villages by ratio between samples, population and household within the forest area in each village that any village with more population were accrued sampled. Results were as follows:

**Table 3** Ratio of Family Sample

Tambon	Group No.	Village Name	Total Households*	Samples
Can	1	Can Tai	127	28
	2	Tam Yae	163	36
	3	Waeng Chai	112	25
	4	Nong Jode	43	9
	5	Khok Klang	54	11
	6	Kwow Khor	84	18
	15	Can Nuer	112	25
	16	Khok Sa-ad	45	10

**Table 3** Ratio of Family Sample (Cons)

Tambon	Group No.	Village Name	Total Households*	Samples
Nong Saeng	14	Pla Boo	52	11
	15	Soke Yang	112	25
	16	Nong Dern	94	19
	17	Kra Yom	121	26
	27	Dern KHam	68	14
Dong Yai	3	Dong Yai	43	8
	7	Don Jaroen	73	14
	12	Don Han	84	17
Khok Si	6	Burapha Pattana	77	16
Thong Lang	7	Khok Pac	62	13
Ban Whai	9	Ma Saew	106	24
	10	Nong Ngong	39	9
Total			1667	360

*Source: Office of Statistics, Mahasarakham Province, BE 2543*

### Sampling

A Simple Random Sampling was used by recording House Number of the population. Also, random balloting was used to fulfill the sample size in each village.

### A Qualitative Research

A stratified sampling is used in the qualitative research, particularly among the committee management of the Khok Yai community forest and the 5 tambon administration organization living around the forest, which were the related organization and played key role in the management of the Khok Yai community forest. To allow data covering all issues of study, the researcher randomly sampled 6 from 12 in relation to the committee management of the Khok Yai community forest,

who represented the 20 villages living around the forest. 6 committee members for in-dept interviews from the committee management of the Khok Yai community forest thus was sampled as follows:

Table 4 List of Board of the Khok Yai Community Forest Management

Serial No.	Name – Lastname	Position
1	Mr. Boonrueng Yangkruea	Chairman *
2	Mr. Boonrueng Naowkaew	Vice Chairman
3	Mr. Muen Maddhapatho	Member
4	Mr. Thongsak Maddhapatho	Member *
5	Mr. Udom Madhipikhai□	Member *
6	Mr. Nakin Naowkaew	Member *
7	Mr. Boonyang Can-nong	Member
8	Mr. Boonlert Thaong-pin	Member *
9	Mr. Sangko Pholsri	Member
10	Mr. Jantra Fa-si	Member
11	Mr. Luon Papalang	Member *
12	Mr. Prom Pholkham-mark	Member

*\*committee member being taken for in-dept interview*

Out of five, three Tambon Administration Organizations (TAO) located around the Khok Yai

Community forest have been randomly sampled by balloting for the in-dept interview as illustrated in Table 5 below:

Table 5.1 List of Tambon Administration Organization Located around the Khok Yai Community Forest

Serial No	List of the Tambon Administration Organizations
1	Can
2	Nong Saeng
3	Song Yai *
4	Khok Si Thong Lang *
5	Ban Whai*

\* *Samples of TAO for In-depth Interviews*

### 3.2 Research Instrument and Its Quality Development

The Questionnaire is the research instrument in quantitative research and the in-depth interviews are used for qualitative research as detail follows:

#### Formulation of Questionnaire

Questionnaire was formulated in this investigation for data collection based on studies of the village background, concepts, theories, and the literature reviews as well as related researches concerning the people's participation, the community forest and the community forest management to be as guide in determining contents of the questionnaire, which was divided as follows:

Part 1: The questionnaire was focused on general background and the general natures of population containing individual information i.e. gender, age, education, number of family member, marital status, economic. Also there are social factors i.e. occupation, annual family income, social status, duration of stay in the community, distance from home to the community forest, and information receptivity. It was the Close – ended Questions and the Open - ended Questions.

Part 2: The question about the community forest – the people knowledge inquires on the community forest, the community forest management, approaches of prevention, and the community forest exploitation. The nature of the

questionnaire was the Close – ended Questions with 2 choices under the following criteria:

Correct answer would gain 1 score

Incorrect answer would gain 0 score

When the raw data of levels of knowledge had been regrouped into 3 levels using the Mean and Standard Deviation as indicator under the following criteria

Low level of knowledge interval score  $0 - [\bar{X} - SD]$  score

Moderate level of knowledge interval score  $\bar{X} + SD$  score

High level of knowledge interval score  $\bar{X} + SD$  to 20 scores

Bloom, Benjamin .S, (1956:109) method was used in the content analysis of the knowledge measurement.

Table 5.2 Illustration of Content Analysis on Measurement the Knowledge of Community Forest

Contents	Level of Learning Behavior						
	Memory	Understa nding	Applica tion	Analysi s	Synthes is	Evalua tion	Total
Community Forest	1,20	2,5					4
Community Forest Management	12,13,	3,4,6,7, 15,17,					8
Securing and Preserving The Community Forest	9,10,11, 14,16,19	8,18,					8
Total	10	10					20

Part 3: Questions of perception on the community forest management – Rating Scale of Likert’s were modified to measure the perception of the community forest management. It contained 5 levels, i.e. strongly agree, agree uncertain, disagree, and strongly disagree, however, they were modified into 3 levels, i.e. agree, uncertain and disagree. By the reasons, that most population were agriculturists by occupation and completing only primary education, it was helpful to respond the 3 choices in the Close – ended Questions containing both positive and negative contents under the following criteria.

Levels of Perception	Positive Scoring	Negative Scoring
Agree	3	1
Uncertain	2	2
Disagree	1	3

When raw data of each sample were grouped into new 3 groups using Mean and Standard Deviation as indicators under the following criteria:

- Low level of perception                      interval score  $0 - [\bar{X} - SD]$  score
- Moderate level of perception              interval score  $\bar{X} + SD$               score
- High level of perception                    interval score  $\bar{X} + SD$  to 60 scores

Table 6              Content Analyses of Perception in the Khok Yai Community Forest Management

Contents	Types of Contents		
	Positive	Negative	Total
Perception in the Khok Yai Community Forest Management	1,2,3,5,8,10,11,14,15,17,18, 19,20	4,6,7,9,12,13,1	20
Total	13	7	20

Part 4 Questions of People's Participation in relation with the community forest management, which were the Close - ended Questions under the scoring criteria:

Frequency	Score
Always	2
Sometimes	1
Never	0

When raw data of each sample were grouped into new 3 groups using Mean and Standard Deviation as indicators under the determined criteria – groups of high/moderate/low participation

Low level of participation	Scored between	0-5 marks
Moderate level of participation	Scored between	6-22 marks
High level of participation	Scored from	more than 23 marks

Table 7 Content Analyses of People's Participation in the Khok Yai Community Forest Management

Contents	Items
1. Participation of Problem Analyses	1,2,3,4,5,6,7
2. Participation of Planning and Decision-making	8,9,10,11
3. Participation of Operation	12,13,14,15,16
4. Participation in Pursuing and Evaluating	17,18,19,20

Part 5 Questions of factors, problems and barriers, solutions and community forest management, which were the Open - ended Questions.

#### The In-depth Interviews

To clearer realize the levels of participation, the factors relating participation, and problems of the community forest management, the researcher used the in-depth interviews in data collection to gain the complete qualitative data under the

conceptual framework of this study. The issues and structures of the in-depth interviews were as follows

### **Issues of the study**

1. The social and economic status of people living around the Khok Yai community forest
2. Problems of the natural resource exploitation in the Khok Yai community forest
3. Problems of people's participation in the Khok Yai community forest management

### **Structures of In-depth Interviews**

**Part 1:** The interviewee's background

1. Name and last-name
2. Age
3. Office

**Part 2:** The social and economic status of people living around the Khok Yai community forest

1. Family characteristics of most people
2. Whether each year most people had to work year round and when did they have free time during the year span?
3. What were statuses of most people such as affordable, poor, or very poor.

**Part 3:** Problems of the natural resource exploitation in the Khok Yai community forest

1. Indicating the Khok Yai community Forest since the past to present
2. Indicating the community forest exploitation, whether were there any criteria of exploitation?
3. Indicating the models of obligations and rules.

**Part 4:** *Problems of people's participation in the Khok Yai community forest management*

- 1 Whether having any action plans and projects of the community forest management, and if having-what were they.
2. Whether related organizations shared in decision-making and planning in the management?
3. What are problems in the community forest management
- 4 To what extent the people and organizations share in activities of securing and preserving the community forest.

### **The Instrument Development**

A pretest was conducted to gain the validity and the reliability of the instrument as follows:

1. The formulated questionnaire was submitted to thesis advisor for corrections, accuracy, and the clarity of both language and questions.
2. The improved questionnaire was experimented with 30 samples who were not the determined group prior to actual investigation.

### **The Quality Test of the Instrument**

1. The Model to Measure the Knowledge of the Community Forest Management – itemized analyses had been conducted to find out the probability and the distributions by using the techniques of 25% as follows: (Boondaham Kijpreeda-borrisudhi, BE 2534:86-87)

$$P = \frac{P_H + P_L}{n}$$

$$r = \frac{P_H + P_L}{2n}$$

Whereas P = indicator of probability

r = distribution power

P<sub>H</sub> = number of right answer in high group respondents

P<sub>L</sub> = number of right answer in low group respondents

n = total number of respondents of both high and low group

Items of probability of 0.2-0.8 were selected, whereas the score of distribution power were selected only from items scored of 0.2 and above for the actual uses. It was found out that there were 18 items were able to use in the test for knowledge measurement (those with scores of more than 0.2). The rest 2 items gained less than 0.2, which were item 6 and 13. Both items were later appropriately improved to be use for further investigation.

It was found out in the itemized probability that 18 items were useable (probability of 0.2 – 0.8). The rest 2 items gained less than 0.2 (items 6 and 13). They were critically improved to test the knowledge by properly readjustment.

18 items were found out in findings of probability (  $p = 0.2 - 0.8$ ), whereas another 2 items ( No. 6 and 13) with scores of less than 0.2 were essentially improved to test the knowledge.

Formula KR-20 was used in the reliability analysis by testing the internal constancy as follows: (Boondaham Kijpreeda-borrisudhi, BE 2534:203-204)

$$r_{tt} = \frac{k}{k-1} \left[ 1 - \frac{\sum pq}{S_i^2} \right]$$

Whereas  $k$  = total number of the question

$p$  = ratio of the correct respondents

$q$  = ratio of the wrong respondents

$S_i^2$  = Sum of the variance score

Reliability had been tested by the formula K-20 of Kuder Richardson, it was found out that the questionnaire gained reliability at 0.71, which is applicable for the investigation (determined reliability score was 0.70 and above)

## 2. Model to Test the Participation

Coefficient Alfa of Cronbach was used in reliability analysis as follows (Poungat Thaweerat, BE 2540:125)

$$\alpha = \frac{n}{n-1} \left[ 1 - \frac{\sum S_i^2}{S_t^2} \right]$$

Whereas	$\alpha$	=	Coefficient Reliability
	$n$	=	number of items in testing the participation
	$S_i$	=	variance score of each item
	$S_t$	=	variance score of the whole questionnaire

It was found out that the coefficient alpha of Cronbach with the test in participation was 0.85, which it was applicable to the investigation (determined scale was 0.70).

### 3.3 Data Collection

#### The Quantitative Data Collection

Interviews were used in associated with questionnaire. A head of each household or the representative with the age of more than 18 years was interviewed according to the number of the group to meeting the required number.

#### The Qualitative Data Collection

The in-dept interviews were used with the local leader relating to the community forest management i.e. the network committee of the community forest, and the chairman of the Tambon Administration Organization, and the executives according to the number of samples balloted to meeting the required number.

### 3.4 Data Analysis

After collecting the questionnaire from fieldwork, all sets of questionnaire were checked for accuracy and the completion of the data as well as setting manual and encoding. Later the encoded data were analyzed by micro computer using the program of SPSS for Window a Statistical Package For Social Science.

### **The Statistical Application**

1. Percentage, mean, and standard deviation are used in the analysis of the general information.
2. Mean, standard deviation, frequency, and percentage were used with the level of participation in the community forest management.
3. Chi-square ( $\chi^2$ ) was used in testing the relationship of independent variables and the dependent variables determining the statistical significance at 0.05 level ( $\alpha=0.05$ ). It was meant that if the score of the statistical significance was less than 0.05 ( $P<0.05$ ), it was referred to there was statistically significant relationship between the independent variables and the dependent variables. Nevertheless, if the score of the statistical significance was more than or equal to 0.05 ( $P \geq 0.05$ ), it was referred to that there was no relationship between the independent variables and the dependent variables.(Choosri Wongrattana, BE 2541:219-220)
4. The Descriptive Approach Analysis was used in the analysis of the qualitative data.

## CHAPTER IV

### RESULTS

A study of People's Participation in Community Forest Management: a Case Study of Khok Yai Community Forest, Mahasarakham Province was to investigate levels of people's participation in the community forest management, the factors relating the people participation in the community forest management including the problems, barriers, and recommendations in the management of the community forest. A Survey Research had been conducted in both qualitative and quantitative using Questionnaire and sampling 360 household head residents living around the Khok Yai forest. SPSS/PC+ was used in data analyses. The researcher would present analyzed results of both quantitative and qualitative studies as follows:

- 4.1 Results of Quantitative Studies Analyzed from Questionnaire
- 4.2 Results of Qualitative Studies Gained from In-depth interview

**4.1 Quantitative Results Analyzed from Questionnaire were concluded as follows:**

#### **4.1.1 Population Data and General Data**

a study had been conducted with 360 household head aged of more than 18 years living around the area of Khok Yai forest, Wapepathum District, Mahasarakham Province as details follows:

**Gender**

It was found out that 59.4% of samples were male and 40.6% were females as shown in Table 8

**Table 8** Frequency and Percentage Distributed by Gender

Gender	Frequency	Percentage
Male	214	59.4
Female	146	40.6
Total	360	100

**Age**

It is found out that 34.7% of samples were 40-49 years, the second was 24.7% of the samples were 50-59 years, 22.8% were 30-39 years, 8.1% were 60-69 years, 6.9% were 20-29 years, and 1.4% were both less than 20 years and more than 70 years. Age by average was 45 years (Mean = 44.53). The oldest was 82 years and the youngest was 17 years as shown in Table 9

**Table 9** Frequency and Percentage Distributed by Age

Age	Frequency	Percentage
Less than 20 years	5	1.4
20 - 29 years	25	6.9
30 - 39 years	82	22.8
40 - 49 years	125	34.7
50 - 59 years	89	24.7
60 - 69 years	29	8.1
more than 70 years	5	1.4
Total	360	100.0

*Mean = 44.53 Max = 82 Min = 18*

**Education**

It was found out that 74.4% of the samples acquired primary level. The second was 16.4% from junior secondary level. 5.3% from senior secondary level or

equivalent, 2.8% from bachelor degree, and 0.6% were both found with pre-bachelor degree and from no schooling as shown in Table 10

Table 10 Frequency and Percentage Distributed by Education

Education	Frequency	Percentage
Primary	268	74.4
Junior secondary	59	16.4
Senior secondary/equivalent	19	5.3
bachelor	10	2.8
no schooling	2	0.6
pre-bachelor/equivalent	2	0.6
Total	360	100.0

### Number of Family Member

It is found out that 82.2% of the samples accommodated less than 5 family members, 17.2% accommodated 5-10 members, an 0.6% accommodated more than 10 members respectively as shown in Table 11.

Table 11 Frequency and Percentage Distributed by Number of Family Member

Family Member	Frequency	Percentage
Less than 5 persons	296	82.2
5 - 10 persons	62	17.2
more than 10 persons	2	0.6
Total	360	100.0

*Mean = 4.34 Min = 1 Max = 12*

### Marital Status

It was found out that 79.4% of the samples were married, 13.1% were single, and 7.5% were widow/divorced/separated, respectively as shown in Table 12.

Table 12 Frequency and Percentage Distributed by Marital Status

Marital Status	Frequency	Percentage
Married	286	79.4
Single	47	13.1
widow/divorced/separated	27	7.5
Total	360	100.0

### Occupation

It was found out that 91.1% of the samples ha key occupation of paddy farming. The second was 3.3% were plantation/orchard, 2.2% were general labors, 1.4% were government officials, 1.1% were merchants, 0.8% were employed by companies/state enterprises as shown in Table 13.

Table 13 Frequency and Percentage Distributed by Occupation

Occupation	Frequency	Percentage
Paddy farming	328	91.1
Plantation/orchard	12	3.3
General labor	8	2.2
Government official	5	1.4
Merchant	4	1.1
Company/state enterprise employee	3	0.8
Total	360	100.0

### Family Annual Income

It was found out among the samples' family annual income that 36.15% earned 10,001 - 20,000 Baht, 33.6% earned less than 10,000 Baht, 12.8% earned 20,001 - 30,000 Baht, 7.2% earned 40,001 - 50,000 Baht, 5.3% earned more than 50,000 Baht, and 5.0% earned 30,001 - 40,000 Baht, respectively. The average family annual income was 24,164 Baht (Mean = 24,164.44). The least earned 2,000 Baht and the highest earned 270,000 Baht as shown in Table 14

Table 14 Frequency and Percentage Distributed by Family Annual Income

Family Annual Income	Frequency	Percentage
Less than 10,000 Baht	121	33.6
10,001 - 20,000 Baht	130	36.1
20,001 - 30,000 Baht	46	12.8
30,001 - 40,000 Baht	18	5.0
40,001 - 50,000 Baht	26	7.2
more than 50,000 Baht	16	5.3
Total	360	100.0

*Mean = 24,164.44 Max = 270,000 Min = 2,000*

#### Duration of Residing in Community

It was found out that 23.9% of the sampled resided for 40-49 years in the community. the second was 21.4% resided for 30-39 years, 16.7% resided for 50-59 years, 16.4% resided for 20-29 years, 13.9% resided for 0-19 years, 6.7% resided for 60-69 years, and 1.1% resided for more than 70 years. The average of duration was 37 years (Mean = 37.46). The shortest duration was 4 years, the longest was 100 years as shown in Table 15

Table 15 Frequency and Percentage Distributed by Duration of Residing in Community

Duration of Residing in Community	Frequency	Percentage
0 - 19 years	50	13.9
20 - 29 years	59	16.4
30 - 39 years	77	21.4
40 - 49 years	86	23.9
50 - 59 years	60	16.7
60 - 69 years	24	6.7
more than 70 years	4	1.1
Total	360	100.0

*Mean = 37.46 Max = 100 Min = 4*

### Social Status

It was found out that 55.8% of the samples had no social status. The second of 20.0% were leaders of the community (head of the Tambon, inspector of Tambon, head of village, and assistant of head of the village), 15.8% were village committee/the community forest committee, 5.8% were the member of the Tambon Administration Organization, and 2.5% were others, respectively as shown in Table 16.

Table 16 Frequency and Percentage Distributed by Social Status

Social Status	Frequency	Percentage
No	201	55.8
Community Leader	72	20.0
Village committee/community forest committee	57	15.8
Member of Tambon Administration Organization	21	5.8
Others	9	2.5
Total	360	100.0

### Distance of Residence to the Community Forest

It was found out that 50.6% were 801 - 3,000 meters in distance, 34.2% were 0 – 800 meters, 9.4% were more than 5,001 meters, and 5.8% were 3,001 - 5,000 meters, respectively as shown in Table 17

Table 17 Frequency and Percentage Distributed by Distance of Residence to the Community Forest

Distance of Residence to the Community Forest	Frequency	Percentage
0 - 800 meters	123	34.2
801 - 3,000 meter	182	50.6

Table 17 Frequency and Percentage Distributed by Distance of Residence to the Community Forest (continue)

Distance of Residence to the Community Forest	Frequency	Percentage
3,001 - 5,000 meters	21	5.8
more than 5,001 meters	34	9.4
Total	360	100.0

*Mean = 2,195.64 Max = 10,000 Min = 30*

#### News of Community Forest

It was found out that 96.1% of samples had ever received news of the community forest only few or 3.9% had never received the news, as shown in Table 18

Table 18 Frequency and Percentage of Samples Distributed by Ever or Never Received News of Community Forest

News of Community Forest	Frequency	Percentage
Ever	346	96.1
Never	14	3.9
Total	360	100.0

#### News Resources

It was found out that message received in relation to the community forest were from the community leaders. The second was the broadcasting tower in the village, neighbors, forestry staff, member the Tambon Administration Organization, radio/television, and private organization, as shown in Table 19

**Table 19** Frequency and Percentage of Samples Ever Received News Distributed by News Sources

Sources	Frequency
Community leader	290
Village broadcasting tower	180
Neighbor	130
Forestry staff	113
Member of the Tambon Administration Organization	91
Radio/television	76
Private organization	61
<b>Total</b>	<b>941</b>

Notes: some samples received news from more than one sources

### **Exploitation of the Khok Yai Community Forest**

It was found out that 98.6% exploited the Khok Yai Community Forest, and only 1.4% did not exploit, as shown in Table 20

**Table 20** Frequency and Percentage of Samples Distributed by Exploitation of the Khok Yai Community Forest

Exploitation	Frequency	Percentage
Ever	355	98.6
Never	5	1.4
<b>Total</b>	<b>360</b>	<b>100.0</b>

### **Types of Exploitation**

It was found out that most sample collected forest products. The second was woodcutting for home building, research works and others respectively as shown in Table 21.

**Table 21** Frequency and Percentage of Samples Exploiting from the Community Forest Distributed by Types of Exploitation

Types of Exploitation	Frequency
Forest products	340
Woodcutting for home building	74
Research works	28
others	5
<b>Total</b>	<b>447</b>

Notes: some samples exploited more than one type

#### 4.1.2 Knowledge of People in Community Forest Management

It was the measurement of community forest knowledge, the Khok Yai community forest and its management regarding knowledge, memory, and understanding of 20 items with 20 scores. They were right-wrong answer. The results shown in Table 22 were as follows

Knowledge of item 1: “ The community forest was referred to the specified forest for community with supervision and being kept for the benefits of community member.” 95.0% of samples correctly answered, while 5.0% incorrectly answered.

Knowledge of item 2: “ When being the community forest, villagers owned rights to cut wood, collect forest products, herbs, food and wild animals to what ones needed without being reprimanded.” 78.3% of samples correctly answered, while 21.7% incorrectly answered.

Knowledge of item 3: “ People or community living around the community forest should directly participate in guarding the forest.” 95.0% of samples correctly answered, while 5.0% incorrectly answered.

Knowledge of item 4. “ The best guardian of the community forest was the people as well as the government officials.” 95.3% of samples correctly answered, while 4.7% incorrectly answered.

Knowledge of item 5: “The guarding of the Khok Yai community forest was meant only for winning the contest and fame of the village.” 89.2% of samples correctly answered, while 10.8% incorrectly answered.

Knowledge of item 6: “For the best benefits in guarding the community forest, there must be planning in management, determining activities in guarding, and supervised by community people.” 90.3% of samples correctly answered, while 9.7% incorrectly answered.

Knowledge of item 7: “The forestry officials of Wapeepathum District, and the provincial forestry officials of Maharakham Province who had the duty to determine ways to guard the Khok Yai community forest.” 60.0% of samples correctly answered, while 40.0% incorrectly answered.

Knowledge of item 8: “The guarding of the Khok Yai community forest was the duty of the government only, people should not involve.” 86.7% of samples correctly answered, while 13.3% incorrectly answered.

Knowledge of item 9: “The prevention and fire blockage building were parts of guarding the community forest.” 97.2% of samples correctly answered, while 2.8% incorrectly answered.

Knowledge of item 10: “When illegal woodcutting found within the community forest, we should inform the head of the tambon, head of the village or the community forest committee.” 97.2% of samples correctly answered, while 2.8% incorrectly answered.

Knowledge of item 11: “The people could reserve land for farm crops, and plantation within the Khok Yai community forest freely.” 88.9% of samples correctly answered, while 11.1% incorrectly answered.

Knowledge of item 12: “Each community forest management might be differed to locality and culture.” 86.4% of samples correctly answered, while 13.6% incorrectly answered.

Knowledge of item 13: “Regulations of community forest should be formed by community people.” 82.2% of samples correctly answered, while 17.8% incorrectly answered.

Knowledge of item 14: “Wood cutting and deforestation directly affect people’s life styles in the community.” 91.7% of samples correctly answered, while 8.3% incorrectly answered.

Knowledge of item 15: “All people could gain benefits from the community forest without following the regulations of the community forest.” 77.5% of samples correctly answered, while 22.5% incorrectly answered.

Knowledge of item 16: “The guarding of the Khok Yai community forest and the preservation of soil, water, and wild life in the community forest.” 92.2% of samples correctly answered, while 7.8% incorrectly answered.

Knowledge of item 17: “If people in the community illegally cut wood in the community forest, there would be no punishment according to the community regulations.” 77.2% of samples correctly answered, while 22.8% incorrectly answered.

Knowledge of item 18: “The Community Forest Acts under enforcement would be successful when forest benefits and exploitation are recognized.” 92.5% of samples correctly answered, while 7.5% incorrectly answered.

Knowledge of item 19: “Major factors to make community forest project successful was to be supervised by the government officials.” 36.4% of samples correctly answered, while 63.6% incorrectly answered.

Knowledge of item 20: “Benefits from forest was the absorption of rain-water and resulted the seasoned rainfalls.” 95.3% of samples correctly answered, while 4.7% incorrectly answered.



**Table 22** Frequency and Percentage of Samples Distributed by Responses on the Knowledge of Community Forest

Knowledge	Correct answer		Incorrect answer	
	Frequency (persons)	%	Frequency (persons)	%
1. The community forest was referred to the specified forest for community with supervision and being kept for the benefits of community member	342	95.0	18	5.0
2. When being the community forest, villagers owned rights to cut wood, collect forest products, herbs, food and wild animals to what ones needed without being reprimanded	282	78.3	78	21.7
3. People or community living around the community forest should directly participate in guarding the forest	342	95.0	18	5.0
4. The best guardian of the community forest was the people as well as the government officials	343	95.3	17	4.7
5. The guarding of the Khok Yai community forest was meant only for winning the contest and fame of the village	321	89.2	39	10.8
6. 6. For the best benefits in guarding the community forest, there must be planning in management, determining activities in guarding, and supervised by community people	325	90.3	35	9.7

Table 22 Frequency and Percentage of Samples Distributed by Responses on the Knowledge of Community Forest ( continued)

Knowledge	Correct answer		Incorrect answer	
	Frequency (persons)	%	Frequency (persons)	%
7. The forestry officials of Wapeepathum District, and the provincial forestry officials of Mahasarakham Province who had the duty to determine ways to guard the Khok Yai community forest	216	60.0	144	40.0
8. The guarding of the Khok Yai community forest was the duty of the government only, people should not involve	312	86.7	48	13.3
9. The prevention and fire blockage building were parts of guarding the community forest	350	97.2	10	2.8
10. When illegal woodcutting found within the community forest, we should inform the head of the tambon, head of the village or the community forest committee	350	97.2	10	2.8
11. The people could reserve land for farm crops, and plantation within the Khok Yai community forest freely	320	88.9	40	11.1
12. Each community forest management might be differed to locality and culture	311	86.4	49	13.6
13. Regulations of community forest should be formed by community people	296	82.2	64	17.8

Table 22 Frequency and Percentage of Samples Distributed by Responses on the Knowledge of Community Forest ( continued)

Knowledge	Correct answer		Incorrect answer	
	Frequency (persons)	%	Frequency (persons)	%
14. Wood cutting and deforestation directly affect people's life styles in the community	330	91.7	30	8.3
15. All people could gain benefits from the community forest without following the regulations of the community forest."	279	77.5	81	22.5
16. The guarding of the Khok Yai community forest and the preservation of soil, water, and wild life in the community forest	332	92.2	28	7.8
17. If people in the community illegally cut wood in the community forest, there would be no punishment according to the community regulations."	278	77.2	82	7.8
18. The Community Forest Acts under enforcement would be successful when forest benefits and exploitation are recognized	333	92.5	27	7.5
19. Major factors to make community forest project successful was to be supervised by the government officials	131	36.4	229	63.6
20. Benefits from forest was the absorption of rain-water and resulted the seasoned rainfalls	343	95.3	17	4.7

Later the raw data were grouped into 3 groups distinguished by mean  $\bar{X}$  and standard deviation (SD) under the set criteria, i.e. groups of knowledge of high level

moderate level, and low level. It was found out that the low level group gained 8 scores, and the high level group gained 20 scores with the mean of 17 (Mean = 17.04) and the SD = 2.50. After grouping, it was found out that 73.9% of the biggest group had moderate level of knowledge (15-19 scores). The second was the group with low level of knowledge, which was 15.8%, and the high level of knowledge group (more than 20 scores), which was 10.3% respectively as shown in Table 23.

Table 23 Frequency and Percentage of Samples Distributed by Level Grouping on the Knowledge of Community Forest

Level of knowledge	Frequency	Percentage
High (more than 20scores)	37	10.3
Moderate (15 - 19 scores)	266	73.9
Low (0 - 14 scores)	57	15.8
total	360	100.0

Min = 8 scores Max = 20 scores Mean = 17.04 scores S.D. = 2.50

#### 4.1.3 Perception of People in Community Forest Management

These were the contents to measure perception of people in the community forest management containing 20 items with the full scores of 60 marks. It was the rating scale modified from Likert's of 5 levels i.e. strongly agree, agree, uncertain, disagree, and strongly disagree into agree, uncertain and disagree, on the basis that most samples were agriculturists and gaining primary level, which would be easier for them to respond as follows:

Content 1: "The community forest was the natural resources beneficial to life styles of the community people." 96.7% agreed, 2.2% were uncertain and 1.1% disagreed.

Content 2: "The local people owned common rights in guarding and exploiting the community forest." 94.2% agreed, 4.4% were uncertain and 1.4% disagreed.

Content 3: "All villagers participated in the community forest management." 88.3% agree, 7.5% were uncertain and 4.2% disagreed

Content 4: "The community forest committee should not be likely strict or restricted in wood cutting." 57.2% agreed, 22.2% were uncertain and 20.6% disagreed.

Content 5: "The forest management by community was the proper way to guard and to present situations." 73.9% agreed, 20.6% were uncertain and 5.5% disagreed.

Content 6: "Woods in the community forest was for the public and anyone could cut them." 8.9% agree, 11.1% were uncertain and 80.0% disagreed.

Content 7: "Seeking forest products and hunting within the community forest, all in the community were able to do without restriction." 25.6% agreed, 12.5% were uncertain and 61.9% disagreed.

Content 8: "The community forest are the common rights of local people." 90.8% agree, 5.6% were uncertain and 3.6% disagreed.

Content 9: "Flaming for hunting in the community forest was normal." 8.3% agreed, 5.6% were uncertain 86.1% disagreed.

Content 10: "Allowing local people to manage the community forest would lead to reduction of deforestation." 56.1% agreed, 23.9% were uncertain 20.0% disagreed.

Content 11: "People were allowed in woodcutting, and collect forest products for family earning provided they followed rules and regulations of forest exploitation determined by the community." 90.8% agreed, 4.7% were uncertain 4.4% disagreed.

Content 12: "Deforestation was unavoidable and not damageable." 8.9% agreed, 13.9% were uncertain 77.2% disagreed.

Content 13: "Community forest rehabilitation should be responsible by the forestry officials, the Tambon Administration Organization, and the District Agriculture officials only." 20.3% agreed, 18.1% were uncertain 61.7% disagreed.

Content 14: "Community forest exploitation was not deforested if it were well managed and controlled." 90.3% agreed, 8.1% were uncertain 1.7% disagreed.

Content 15: "Allowing people to learn. And recognize problems as well as impacts of deforestation should reduce harm to the forest" 89.2% agreed, 5.3% were uncertain 5.6% disagreed.

Content 16: "Current course of living should focus more on personal income rather than owning community forest" 13.1% agreed, 15.0% were uncertain 71.9% disagreed.

Content 17: "Reforestation should be made in the deteriorated forest and every public area" 91.7% agreed, 5.6% were uncertain 2.8% disagreed.

Content 18: “There should be substitution planting whenever woods in community forest were cut.” 91.4% agreed, 6.9% were uncertain 21.7% disagreed.

Content 19: “Deforestation was equivalent to at the meantime destroying resources of soil, water, wildlife.” 88.3% agreed, 1.9% were uncertain 9.7% disagreed.

Content 20: “Allowing local people to manage their own community forest was the fundamental rights affordable.” 76.7% agreed, 14.2% were uncertain 9.2% disagreed.

As they were shown in Table 24

Table 24 Frequency and Percentage of Samples Distributed by Opinions of the Community Forest Management

Contents	Levels of Perceptions		
	Agree (%)	Uncertain n(%)	Disagree (%)
1. The community forest was the natural resources beneficial to life styles of the community people.	348 (96.7)	8 (2.2)	4 (1.1)
2. The local people owned common rights in guarding and exploiting the community forest.	339 (94.2)	16 (4.4)	5 (1.4)
3. All villagers participated in the community forest management.	318 (88.3)	27 (7.5)	15 (4.2)
4. The community forest committee should not be likely strict or restricted in wood cutting	74 (20.6)	80 (22.2)	206 (57.2)
5. The forest management by community was the proper way to guard and to present situations	266 (73.9)	74 (20.6)	20 (5.6)
6. Woods in the community forest was for the public and anyone could cut them.	40 (11.1)	32 (8.9)	288 (80.0)
7. Seeking forest products and hunting within the community forest, all in the community were able to do without restriction.	92 (25.6)	45 (12.5)	223 (61.9)

**Table 24** Frequency and Percentage of Samples Distributed by Opinions of the Community Forest Management (continued)

Contents	Levels of Perceptions		
	Agree (%)	Uncertai n(%)	Disagree (%)
8. The community forest are the common rights of local people	327 (90.8)	20 (5.6)	13 (3.6)
9. Flaming for hunting in the community forest was normal	30 (8.3)	20 (5.6)	310 (86.1)
10. Allowing local people to manage the community forest would lead to reduction of deforestation.”	202 (56.1)	72 (20.0)	86 (23.9)
11. People were allowed in woodcutting, and collect forest products for family earning provided they followed rules and regulations of forest exploitation determined by the community.”	327 (90.8)	16 (4.4)	17 (4.7)
12. Deforestation was unavoidable and not damageable.	32 (8.9)	50 (13.9)	278 (77.2)
13. Community forest rehabilitation should be responsible by the forestry officials, the Tambon Administration Organization, and the District Agriculture officials only	73 (20.3)	65 (18.1)	222 (61.7)
14. Community forest exploitation was not deforested if it were well managed and controlled.	325 (90.3)	29 (8.1)	6 (1.7)
15. Allowing people to learn. And recognize problems as well as impacts of deforestation should reduce harm to the forest	321 (89.2)	19 (5.3)	20 (5.6)
16. Current course of living should focus more on personal income rather than owning community forest	47 (13.1)	54 (15.0)	259 (71.9)

Table 24 Frequency and Percentage of Samples Distributed by Opinions of the Community Forest Management (continued)

Contents	Levels of Perceptions		
	Agree (%)	Uncertain n(%)	Disagree (%)
17. Reforestation should be made in the deteriorated forest and every public area	330 (91.1)	20 (5.6)	10 (2.8)
18. There should be substitution planting whenever woods in community forest were cut.	329 (91.4)	25 (6.9)	6 (1.7)
19. Deforestation was equivalent to at the meantime destroying resources of soil, water, wildlife.”	318 (88.3)	7 (1.9)	35 (9.7)
20. Allowing local people to manage their own community forest was the fundamental rights affordable	276 (76.7)	51 (14.2)	33 (9.2)

Later the raw data were grouped into 3 groups distinguished by mean  $\bar{X}$  and standard deviation (SD) under the set criteria, i.e. groups of high level perception, moderate level perception, and low level perception. It was found out that the low level group gained 33 scores, and the high level group gained 60 scores with the mean of 54 (Mean = 54.32) and the SD = 4.33. After grouping, it was found out that 74.2% of the biggest group had moderate level of perception (51-59 scores). The second was the group with low level of perception, which was 19.2%(0-50 scores),, and the high level of perception group (more than 60 scores scores), which was 9.7% respectively as shown in Table 25.

Table 25 Frequency and Percentage of Samples Distributed by Level Grouping on the Opinion of Community Forest

Levels of Perception	Frequency	Percentage
High (more than 60 scores)	24	6.7
Moderate (51 - 59 scores)	267	74.2
Low (0 - 50 scores)	69	19.2
total	360	100.0

Min = 33 scores, Max = 60 scores, Mean = 54.32 scores, S.D. = 4.33

#### **4.1.4 People's Participation in Community Forest Management**

They were questions on people's participation in problem analyses, planning, decision-making, operation, and evaluation distributed by frequency of participation i.e. always participating, sometimes participating, and never participating. The results were as follows:

Content 1: "You had ever participated in the meeting of Khok Yai Community forest." 62.2% of samples sometimes participated, 25.0% never participated, and 12.8% always participated

Content 2: "You had ever participated in proposing idea of the Khok Yai community forest management ." 55.0% of samples sometimes participated, 33.6% never participated, and 11.4% always participated

Content 3: "You had ever participating in meeting to find solution for Khok Yai community forest." 52.8% of samples sometimes participated, 37.2% never participated, and 10.0% always participated.

Content 4: "You were only sitting there during meeting." 36.4% of samples sometimes participated, 58.3% never participated, and 5.3% always participated.

Content 5: "In meeting on the Khok Yai community forest, had you ever got conflict of ideas with the key leader?" 35.6% of samples sometimes conflicted, 61.1% never conflicted and 3.3% always conflicted.

Content 6: "After meeting, had you ever protested the key leader regarding your disagreement?" 34.4% of samples sometimes protested, 61.7% never protested and 3.9% always protested

Content 7: "During meeting, did the key leader open opportunity to propose idea?" 42.8% of samples sometimes proposed, 28.3% never proposed and 28.9% always proposed

Content 8: "You had ever participated in the coordination of the Khok Yai community forest." 40.6% of samples sometimes participated, 44.2% never participated and 15.3% always participated

Content 9: "Had you ever participated in determining activities for the Khok Yai community forest?" 49.4% of samples sometimes participated, 35.8% never participated and 14.7% always participated

Content 10: “You had ever participated in setting action plans for the Khok Yai community forest.” 50.0% of samples sometimes participated, 38.6% never participated and 11.4% always participated

Content 11: “Had you ever participated in setting punishment for offenders against rules and regulations of the Khok Yai community forest?” 35.3% of samples sometimes participated, 54.4% never participated and 10.3% always participated

Content 12: “You have ever participated in posting the community forest boundary.” 33.1% of samples sometimes participated, 55.6% never participated and 11.4% always participated

Content 13: “You have ever participated in perform religious rite for trees.” 38.3% of samples sometimes participated, 41.4% never participated and 20.3% always participated

Content 14: “You have ever been participated in demonstration of anti – forest monopoly.” 28.1% of samples sometimes participated, 61.4% never participated and 10.6% always participated

Content 15: “You have ever participated in shift to secure forest from fire flames.” 28.6% of samples sometimes participated, 65.3% never participated and 6.1% always participated

Content 16: “You have ever forbade, cautioned, or intervened the illegal deforestation in your community forest boundary.” 56.1% of samples sometimes participated, 20.3% never participated and 23.6% always participated

Content 17: “You have ever participated in pursuing the growth of the reinforcing planted trees.” 57.8% of samples sometimes participated, 26.9% never participated and 15.3% always participated

Content 18: “You have ever participated in welcoming visitors to tour the Khok Yai community forest.” 54.7% of samples sometimes participated, 26.9% never participated and 18.3% always participated

Content 19: “You have ever follow up the changes of your community forest.” 54.2% of samples sometimes participated, 32.5% never participated and 13.3% always participated

Content 20: “You have ever participated in evaluation the performances of the Khok Yai community forest committee.” 46.1% of samples sometimes participated, 43.1% never participated and 13.3% always participated.

Table 26 Frequency and Percentage of Samples Distributed by Frequency of Participation in the Community Forest Management

Contents	Frequency of Participation		
	Always (%)	sometimes (%)	Never (%)
1. You had ever participated in the meeting of Khok Yai Community forest	46 (12.8)	224 (62.2)	90 (25.0)
2 You had ever participating in proposing idea of the Khok Yai community forest management	41 (11.4)	198 (55.0)	121 (33.6)
3. You had ever participating in meeting to find solution for Khok Yai community forest.	36 (10.0)	190 (52.8)	(37.2)
4 You were only sitting there during meeting	19 (5.3)	131 (36.4)	(58.3)
5 In meeting on the Khok Yai community forest, had you ever got conflict of ideas with the key leader?	12 (3.3)	128 (35.6)	220 (61.1)
6 After meeting, had you ever protested the key leader regarding your disagreement?	14 (3.9)	124 (34.4)	222 (61.7)
7 During meeting, did the key leader open opportunity to propose idea?”	104 (28.9)	154 (42.8)	102 (28.3)
8 You had ever participated in the coordination of the Khok Yai community forest	55 (15.3)	146 (40.6)	159 (44.2)
9 “Had you ever participated in determining activities for the Khok Yai community forest?”	53 (14.7)	178 (49.4)	129 (35.8)

**Table 26** Frequency and Percentage of Samples Distributed by Frequency of Participation in the Community Forest Management (continued)

Contents	Frequency of Participation		
	Always (%)	sometim es(%)	Never (%)
10. You had ever participated in set action plans for the Khok Yai community forest.	41 (11.4)	180 (50.0)	139 (38.6)
11 Had you ever participated in setting punishment for offenders against rules and regulations of the Khok Yai community forest?"	37 (10.3)	127 (35.3)	196 (54.4)
12 You have ever participated in posting the community forest boundary	41 (11.4)	119 (33.1)	200 (55.6)
13 You have ever participated in perform religious rite for trees	73 (20.3)	138 (38.3)	49 (41.4)
14 You have ever been participated in demonstration of anti –forest monopoly	38 (10.6)	101 (28.1)	221 (61.4)
15 You have ever participated in shift to secure forest from fire flames	22 (6.1)	103 (28.6)	235 (65.3)
16 You have ever forbade, cautioned, or intervened the illegal deforestation in your community forest boundary	85 (23.6)	202 (56.1)	3 (20.3)
17 You have ever participated in pursuing the growth of the reinforcing planted trees	55(15.3)	208 (57.8)	7 (26.9)
18 You have ever participated in welcoming visitors to tour the Khok Yai community forest.	66 (18.3)	197 (54.7)	7 (26.9)
19 You have ever follow up the changes of your community forest	48 (13.3)	195 (54.2)	17 (32.5)
20 You have ever participated in evaluation the performances of the Khok Yai community forest committee	39 (10.8)	166 (46.1)	155 (43.1)

Later the raw data were grouped into 3 groups distinguished by mean  $\bar{X}$  and standard deviation (SD) under the set criteria, i.e. groups of high level participation, moderate level participation, and low level participation. It was found out that the low level group gained 0 scores, and the high level group gained 37 scores with the mean of 14 (Mean = 14.05) and the SD = 8.72. After grouping, it was found out that 65.0% of the biggest group had moderate level of participation (6-22 scores). The second was the group with low level of knowledge, which was 22.2%(0-5 scores),, and the high level of knowledge group (more than 23 scores), which was 12.8% respectively as shown in Table 27.

Table 27 Frequency and Percentage of Samples Distributed by Level Grouping of Participation in the Community Forest Management

Levels of Participation	Frequency	Percentage
High (more than 23 scores)	46	12.8
Moderate (6 - 22 scores)	234	65.0
Low (0 - 5 scores)	80	22.2
Total	360	100.0

*Min = 0 score Max = 37 scores Mean = 14.05 scores S.D. = 8.72*

#### 4.1.5 Analysis of Relationship between the Studied Variables with Levels of People’s Participation in Community Forest Management

In the analyses of relationship between participation in the Khok Yai community forest management with gender, age, education, number of family member, occupation, family annual income, community social status, duration of stay in the community, news received about the community forest, the community forest exploitation, knowledge of community forest management, and ideas in the community forest management. Chi-square was used in the statistical applications as follows:

##### Gender

It was found out that male samples moderately participate at 39.7%, highly participated at 11.9% and low participated at 7.8%. However, female samples moderately participate at 25.3%, low participated at 14.4%, and highly participated at 0.8%. When

relationship was tested it was found out that there were statistically significant relationship between gender and participation at 0.05 level as shown in Table 28.

Table 28 Relationship between Gender with Level of Participation in the Community Forest Management

Gender	Level of Participation			
	Low (%)	Moderate (%)	High (%)	Total (%)
Male	28 (7.8)	143 (39.7)	43 (11.9)	214 (59.4)
Female	52 (14.4)	91 (25.3)	3 (0.8)	146 (40.6)
Total	80 (22.2)	234 (65.0)	46 (12.8)	360 (100.0)
$\chi^2 = 42.199, df = 2, P = 0.00, P < 0.05$				

### Age

It was found out those samples with the ages of less than 39 years moderately participate at 22.8%, low participation at 6.9% and highly participation at 1.4%. Samples with the ages of 40-59 years moderately participated at 36.1%, low participation at 13.3% and highly participation at 10.0%. Samples with the ages of more than 60 years moderately participated at 6.1%, the low participation at 1.9% and highly participation at 1.4%, respectively. When relationship was tested it was found out that there were no statistically significant relationship between age and participation at 0.05 level as shown in Table 29.

Table 29 Relationship between Age with Level of Participation in the Community Forest Management

Age	Level of Participation			
	Low (%)	Moderate (%)	High (%)	Total (%)
Less than 39 years	25 (6.9)	82 (22.8)	5 (1.4)	112 (31.1)
40 - 59 years	48 (13.3)	130 (36.1)	36 (10.00)	214 (59.4)
More than 60 years	7 (1.9)	22 (6.1)	5 (1.4)	34 (9.4)
total	80 (22.2)	234 (65.0)	46 (12.8)	360 (100.0)
$\chi^2 = 10.701, df = 4, P = 0.30, P > 0.05$				

**Education**

It was found out that sample with no education moderately and lowly participated in the community forest management at 0.3%, and this group had no participation at the high level. The samples with primary education, junior secondary, and senior secondary had moderately participated at 63.6%, lowly participated at 20.0%, and highly participated at 12.5%. At the meantime, the samples with pre-bachelor and above had lowly participated at 1.9%, moderately participated at 1.1%, and highly participated at 0.3%, respectively. When relationship was tested it was found out that there were statistically significant relationship between education and participation at 0.05 level as shown in Table 30.

Table 30 Relationship between Education with Level of Participation in the Community Forest Management

Education	Level of Participation			
	Low (%)	Moderate (%)	High (%)	Total (%)
No education	1 (0.3)	1 (0.3)	0 (0.0)	2 (0.6)
Primary-Secondary	72 (20.0)	229 (63.6)	45 (12.5)	346 (96.1)
Pre-bachelor and above	7 (1.9)	4 (1.1)	1 (0.3)	12 (3.3)
Total	80 (22.2)	234 (65.0)	46 (12.8)	360 (100.0)
$\chi^2 = 10.497, df = 4, P = 0.033, P < 0.05$				

**Number of Family Member**

It was found out that samples with 1-5 family members moderately participated at 54.2%, lowly participated 17.5%, and highly participated at 10.6%. Samples with more than 6 family members moderately participated at 10.8%, lowly participated 4.7%, and highly participated at 2.2%. When relationship was tested it was found out that there were no statistically significant relationship between number of family member and participation at 0.05 level as shown in Table 31.

**Table 31 Relationship between Number of Family Member with Level of Participation in the Community Forest Management**

Number of Family Member	Level of Participation			
	Low (%)	Moderate (%)	High (%)	Total (%)
1 - 5 persons	63 (17.5)	195 (54.2)	38 (10.6)	296 (82.2)
More than 6 persons	17 (4.7)	39 (10.8)	8 (2.2)	64 (17.8)
Total	80 (22.2)	234 (65.0)	46 (12.8)	360 (100.0)
$\chi^2 = 0.862, df = 2, P = 0.650, P > 0.05$				

### Occupation

It is found out that samples being agriculturists (paddy, farm crops, and orchard) moderately participated at 61.4%, lowly participated 20.6%, and highly participated at 12.5%. Samples being other occupation (general labor, merchant, company/state enterprise employee) moderately participated at 3.6%, lowly participated 1.6%, and highly participated at 0.3%. When relationship was tested it was found out that there were no statistically significant relationship between occupation and participation at 0.05 level as shown in Table 32.

**Table 32 Relationship between Occupation with Level of Participation in the Community Forest Management**

Occupation	Level of Participation			
	Low (%)	Moderate (%)	High (%)	Total (%)
Agriculture	74 (20.6)	221 (61.4)	43 (12.5)	340 (94.4)
Others	6 (1.7)	13 (3.6)	1 (0.3)	20 (5.6)
Total	80 (22.2)	234 (65.0)	46 (12.8)	360 (100.0)
$\chi^2 = 1.579 df = 2, P = 0.454, P > 0.05$				

### Family Annual Income

It is found out that samples with family annual income of 0-30,000 Baht moderately participated at 53.6%, lowly participated 18.3%, and highly participated at

10.6%. Samples with family annual income of more than 30,001 Baht moderately participated at 11.4%, lowly participated 3.9%, and highly participated at 2.2%, respectively. When relationship was tested it was found out that there were no statistically significant relationship between family annual income and participation at 0.05 level as shown in Table 33.

**Table 33 Relationship between Family Annual Income with Level of Participation in the Community Forest Management**

Family Annual Income	Level of Participation			
	Low (%)	Moderate (%)	High (%)	Total (%)
0 - 30,000 Baht	66 (18.3)	193 (53.6)	38 (10.6)	297 (82.5)
More than 30,001 Baht	14 (3.9)	41 (11.4)	8 (2.2)	63 (17.5)
Total	80 (22.2)	234 (65.0)	46 (12.8)	360 (100.0)
$\chi^2 = 0.000$ df = 2, P = 1.000, P > 0.05				

**Community Social Status**

It is found out that samples with no community social status moderately participated at 34.2%, lowly participated 18.6%, and highly participated at 3.1%. Samples with community social status moderately participated at 30.8%, lowly participated 9.7%, and highly participated at 9.7%, respectively. . When relationship was tested it was found out that there were statistically significant relationship between community social status and participation at 0.05 level as shown in Table 34.

**Table 34 Relationship between Community Social Status with Level of Participation in the Community Forest Management**

Community Social Status	Level of Participation			
	Low (%)	Moderate (%)	High (%)	Total (%)
No	67 (18.6)	123 (34.2)	11 (3.1)	201 (55.8)
Yes	13 (3.6)	111 (30.8)	35 (9.7)	159 (44.2)
Total	80 (22.2)	234 (65.0)	46 (12.8)	360 (100.0)
$\chi^2 = 45.304$ df = 2, P = 0.000, P < 0.05				

### Duration of Stay in Community

It is found out that samples with less than 30 years duration of stay in community for moderately participated at 20.3%, lowly participated 6.9%, and highly participated at 3.1%. Samples with 30-49 years duration of stay in community moderately participated at 29.2%, lowly participated 9.7%, and highly participated at 3.6%. Samples with more than 50 years duration of stay in community moderately participated at 15.3%, lowly participated 5.5%, and highly participated at 3.6%, respectively. When relationship was tested it was found out that there were no statistically significant relationship between duration of stay in community and participation at 0.05 level as shown in Table 35.

Table 35 Relationship between Duration of Stay in Community with Level of Participation in the Community Forest Management

Duration of Stay in Community	Level of Participation			
	Low (%)	Moderate (%)	High (%)	Total (%)
Less than 30 years	25 (6.9)	73 (20.3)	11 (3.1)	109 (30.3)
30 - 49 years	35(9.7)	105 (29.2)	22 (6.1)	163 (45.3)
More than 50 years	20 (5.5)	55 (15.3)	13 (3.6)	88 (24.4)
Total	80 (22.2)	234 (65.0)	46 (12.8)	360 (100.0)
$\chi^2 = 1.182, df = 4, P = 0.881, P > 0.05$				

### News Reception of Community Forest

It is found out that samples receiving news of community forest management moderately participated at 63.9%, lowly participated 19.7%, and highly participated at 12.5%. Samples without receiving news of community forest management low participated at 2.5%, moderately participated 1.1%, and highly participated at 0.3%, respectively. When relationship was tested it was found out that there were statistically significant relationship between news reception of community forest and participation at 0.05 level as shown in Table 36.

**Table 36 Relationship between News Reception of Community Forest with Level of Participation in the Community Forest Management**

News Reception of Community Forest	Level of Participation			
	Low (%)	Moderate (%)	High (%)	Total (%)
Yes	71 (19.7)	230 (63.9)	45 (12.5)	346 (96.1)
Never	9 (2.5)	4 (1.1)	1 (0.3)	14 (3.9)
Total	80 (22.2)	234 (65.0)	46 (12.8)	360 (100.0)
$\chi^2 = 14.934$ df = 2, P = 0.001, P < 0.05				

**Exploitation of Community Forest**

It is found out that samples exploiting the community forest moderately participated at 64.4%, lowly participated 21.4%, and highly participated at 12.8%. Samples without exploiting the community forest low participated at 0.8%, moderately participated 0.6%, and no highly participated in this group, respectively. When relationship was tested it was found out that there were no statistically significant relationship between exploitation of community forest and participation at 0.05 level as shown in Table 37.

**Table 37 Relationship between Exploitation with Level of Participation in the Community Forest Management**

Community Forest Exploitation	Level of Participation			
	Low (%)	Moderate (%)	High (%)	Total (%)
Yes	77 (21.4)	232 (64.4)	46 (12.8)	355 (98.6)
No	3 (0.8)	2 (0.6)	0 (0.0)	5 (1.4)
Total	80 (22.2)	234 (65.0)	46 (12.8)	360 (100.0)
$\chi^2 = 4.392$ , df = 2, P = 0.111, P > 0.05				

### Level of Knowledge of Community Forest

It is found out that samples having moderate knowledge of community forest moderately participated at 45.0%, lowly participated 19.4%, and highly participated at 9.4%. Samples having low knowledge of community forest moderately participated at 13.6%, lowly participated 1.9%, and highly participated at 0.3%, respectively. Samples having high knowledge of community forest moderately participated at 6.4%, highly participated 3.1%, and lowly participated at 0.8%. When relationship was tested it was found out that there were statistically significant relationship between level of knowledge of community forest and participation at 0.05 level as shown in Table 38.

Table 38 Relationship between Level of Knowledge of Community Forest with Level of Participation in the Community Forest Management

Level of Knowledge of Community Forest	Level of Participation			
	Low (%)	Moderate (%)	High (%)	Total (%)
Low (0 -14 scores)	7 (1.9)	49 (13.6)	1 (0.3)	57 (15.8)
Moderate (15 - 19 scores)	70 (19.4)	162 (45.0)	34 (9.4)	266 (73.9)
High (more than 20 scores)	3 (0.8)	23 (6.4)	11 (3.1)	37 (10.3)
Total	80 (22.2)	234 (65.0)	46 (12.8)	360 (100.0)
$\chi^2 = 26.187, df = 4, P = 0.000, P < 0.05$				

### Level of Perception Related to Community Forest Management

It is found out that samples having moderate level of perception related to community forest management moderately participated at 45.8%, lowly participated 17.5%, and highly participated at 10.8%. Samples having low level of perception related to community forest management moderately participated at 15.8%, lowly participated 3.3%, and no highly participated. Samples having high level of perception related to community forest management moderately participated at 3.3%, highly participated 1.9%, and lowly participated at 1.4%. When relationship was tested it was found out that there were statistically significant relationship between level of

perception related to community forest management and participation at 0.05 level as shown in Table 39.

Table 39 Relationship between Level of Perception of Community Forest with Level of Participation in the Community Forest Management

Level of Perception Related to the Community Forest Management	Level of Participation			
	Low (%)	Moderate (%)	High (%)	Total (%)
Low (0 -50 score )	12 (3.3)	57 (15.8)	0 (0.0)	69 (19.2)
Moderate (51 - 59 scores)	63 (17.5)	165 (45.8)	39 (10.8)	267 (74.2)
High ( more than 60 scores)	5 (1.4)	12 (3.3)	7 (1.9)	24 (6.7)
Total	80 (22.2)	234 (65.0)	46 (12.8)	360 (100.0)
$\chi^2 = 20.076, df = 4, P = 0.000, P < 0.05$				

#### 4.1.6 Problems and Barriers and Solutions of Community Forest Management

From the investigation of problems and barriers in handling the Khok Yai community forest management by data collection from 360 sets, it was concluded in clear issues as follows

##### **Did you have action plans to handle the community forest and How?**

From the 360 sets of questionnaire, explanations could be stepped as follows

Step 1: during BE 2536, when forest intrusion had been made, changes had been affected conditions and natures of the Khok Yai community forest. Campaigns and public relations had been launched among the villages around the forest by village leaders who saw the problems and its criticality to allow people participating both at the levels of community and multi groups of communities. It was supported by the government sector. During BE 2527, the office of Wapeepathum District, Makasarakham Province had measured the existing rich area in association with community, and community leaders who own lands for living attached to the forest. The project of preservation and rehabilitation of the Khok Yai community forest supported the private sectors on the activities of preserving forest organized by

communities located around the forest to form the community forest. There was administration and the mutual exploitation of people, and communities around the forest. Village organizations had been arranged to guard the forest. Currently, all 20 villages under the administration of 5 tambons perceived the rules, regulations, and obligations in guarding the Khok Yai community forest announced on October 15, BE 2537 as follows:

1. Prohibition of cutting and reproducing all kinds of woods within the community forest before being permitted
2. Prohibition of motor saws and all kinds of saws entering the forest before being permitted
3. Prohibition of enflaming forest and hunting wildlife in the forest
4. Prohibition of all kinds of cars entering the forest before being permitted
5. Prohibition of bringing out herbal species and all kinds of animal breeds from the forest
6. Prohibition to intrude for reservation and possession in the Khok Yai community forest
7. Any offender will be fined from 500-50,000 Baht.

Step 2: There was the forest guarding at the level of the network among 20 villages on coordination for collaboration of members within village network in relation to guarding the forest and following the rules and regulations as well as being the representative of the government and private sectors to support activities those facilitate the preservation and guarding the community forest.

Step 3: Reforestation activities had been organized in the community forest to replace the deforestation and intrusion for living in order to rehabilitate the Khok Yai community forest.

Step 4: Meetings had been organized to help guarding, rehabilitating as well as preserving forest for younger generations in the future.

Step 5: Arrange the fire blockage and plan fire extinguishing if flames occurred

The sample groups differently prioritized the management plans of the community forest as shown in Table 27 respectively. For examples, there should be

reforestation, determining clear territory of the community forest, guarding the forest intrusion for lands of living of some groups, building fire blockage, providing knowledge for people and publicity to identify the performance and the operation of the community forest management of the committee as shown in Table 40

Table 40 Action Plan Briefing on the Community Forest Management of People

Action Plans	Frequency	Percentage
Additional forestation	251	69.72
Specify clear community forest boundary to prevent intrusion for owning lands for living of some persons and some groups	129	35.83
Build forest flames blockages	121	33.61
Provide knowledge and public relation to clear performance and community forest operation of the committee	100	27.78
Ignorance of action plan	53	14.72

Notes: Sample groups were able to indicate action plans of more than 2

### Problems/Barriers of the Community Forest Management

The sample groups differently prioritized the problems and barriers of the community forest management receptively i.e. illegal woodcutting, collections of herbal species from the Khok Yai community forest by people from other localities, forest flames both blazed by human and nature in summer, and the intransparency of the committee as well as the inadequacy of the publicity on the action plan including performance as shown in Table 41.

Table 41 Priorities of Problems/Barriers of Related to the Community Forest Management

Problems/Barriers	Frequency	Percentage
Illegal deforestation and collection of herbal species from the Khok Yai community forest by people from other locality	354	98.33
Forest flames caused by people and nature, in summer	201	57.83

**Table 41 Priorities of Problems/Barriers of Related to the Community Forest Management**

Problems/Barriers	Frequency	Percentage
The intransparent operation of the committee and inadequacy of public relation to explain the action plans and performance	199	55.28
Inadequacy of providing knowledge and public relation on community forest	96	26.67
Clearly specify boundary and forest territory	94	26.11

### **Approaches to Solve the Problems of the Community Forest Management**

Sample groups had proposed approaches to solve problems, which were significantly concluded as follows

**Table 42 Problems, Barriers and Solutions of the Community Forest Management**

Problems/Barriers	Solutions
Illegal deforestation and collection of herbal species from the Khok Yai community forest by people from other locality	<ol style="list-style-type: none"> <li>1. Locate checkpoints at entry-exit of the forest</li> <li>2. Construct the road around the forest for the convenience of patrolling and supervising</li> <li>3. Villagers should patrol and caution the intruders and if being ignored, the head of the tambons or the community forest committee must be informed.</li> <li>4. reforestation</li> </ol>
Inadequacy of providing knowledge and public relation on community forest	<ol style="list-style-type: none"> <li>1. Online broadcasting on community forest and laws of the community forest</li> <li>2. Organize training on knowledge of the community forest and laws of the community of the community forest</li> </ol>

Table 42 Problems, Barriers and Solutions of the Community Forest Management

Problems/Barriers	Solutions
Clearly specify boundary and forest territory	<ol style="list-style-type: none"> <li>1. Respecify boundary by informing the forestry authority to install stone-post along the boundary of the community forest</li> <li>2. Inform villagers around the boundary of the community forest for acknowledgement.</li> </ol>
The intransparent operation of the committee and inadequacy of public relation to explain the action plans and performance	<ol style="list-style-type: none"> <li>1. the community forest committee organize meeting to monthly clear the details and the budget for the community forest to all people</li> </ol>
Forest flames caused by people and nature	<ol style="list-style-type: none"> <li>1. All villagers should help extinguishing forest flames</li> <li>2. Build fire blockage and routes for fire extinguishers.</li> <li>3. Excavate ponds in the community forest to reserved water for summer uses and forest flaming.</li> </ol>

#### 4.2 Qualitative Results of In-depth interviews

The In-depth interviews of local leaders were used in the investigation of the people's participation of the community forest management: a case study of the Khok Yai community forest, Maharakham Province. Social and economic issues of people living around the forest, the natural resources problems in the Khok Yai community forest, and the people's participation in the community forest management as details followed:

#### **4.2.1 Social and Economic Conditions of Societies Living around the Khok Yai Forest**

Most families in the community living around the forest contain 2 natures i.e. a single family and the expanded family. The single families accommodated unmarried children, then later after marriage they would separate to build anew family. However, they most stayed in the neighboring areas or within the same village. At the meantime, the expanded family accommodated children even after they have married and it was mostly found that the youngest would nurture the parents, who would not separate from the family. Husband was the leader of the family both in thinking and decision-making in handling family problems.

The major occupation was agriculture i.e. annual paddy crops dependency to the natural rains,. Their annual income was 15,000-20,000 Baht a family. Further, some family planted tapioca, and cassava covering the areas of 5-10 rais raising the family income of 3,000-5,000 Baht a year. The domestic animals were cattle, which were significant to work as well as using their dung to fertilize plants and soil. In critical cases, they were sold for living. Besides, cattle, the villagers still fed poultry for food in the family as well as for selling if the neighbors were looking for cooking or to host guests during festivities such as monkhood entry, and marriage. Pigs were raised only in the home owning a rice mill since rice thrash was used in raising pigs. Other family disregards the pig raising because there was high cost of foods for feeding but low price of selling.

Another critical source of income for villagers living near the forest was the collection of forest products particularly the mushrooms, which helped raising the family income 500-1,000 Baht a year. However, the familiar family of collecting mushroom would gain 10,000 Baht a year for income. 2 major markets for distributions of agro-products were paddy store in Wapeepathum market and in Borrabue District which was 45 kilometers a distance.

It was further found that among 20 villages there was the migration of labor force into the city and other provinces. The young would migrate to seek job in industrial factories, companies, and shops in Bangkok. The elders after being free from paddy cultivation would also turn to seek construction jobs and general employment in Bangkok

#### **4.2.2 Problems of Using Natural Resources in the Khok Yai Forest**

The recurrent problem related to the natural resources around Khok Yai community forest, the researcher had conducted in-depth interviews and summarized issues of the natural resources in Khok Yai community forest into 3 factors as follows:

1. The illegal woodcutting, collection of herbal plants, hunting wildlife in the Khok Yai community forest from outsiders. With the area of 4,226 rai with the plans of patrolling or using the villagers living around the forest in guarding implementing reprimands, informing the committee to handle if illegal woodcutters were found. Even though, such measures were unlikely solve the problems on account of it was the large size forest with joint roads intersecting with many districts. It was so easy to drive in cars into the area and illegally timbering, bringing out herbal plants and wildlife unfound.

2. Problems of forest flames from human and nature

Even there were effective plans of patrolling or asking villagers around to guard, however, surveillance was unlikely covered all areas. Beside fire extinguishers were inadequate in association with volunteer on account of the budget in remuneration resulted the critical deforestation each year

#### **4.2.3 Problems of People's Participation in the Khok Yai Community Forest Management**

By in-depth interviews with the local leader involving with the community forest management, it was found out that currently, villagers participating in activities of guarding the community forest had been decreasing under 3 major reasons, i.e.

1. The Conflates between Villagers and the Committee of Community Forest Management

On account of some groups of villagers were no understand the work process and the management of the committee and the committee was accused of untransparent in relation to budgeting and working for self benefits as well as for the

relative groups. The reasons were, there were inadequate coordination and proper explanations of action plans as well as the management of projects.

## 2. Inadequacy of Knowledge and Understanding of the Community Forest Policy

There were some groups of villagers earned their living near the community forest and did not likely collaborate in guarding and preserving the natural resources. They as well did not agree with having the community forest on account of misunderstanding that having the community forest would lead to unable to exploit or claimed rights to reap the benefits from the forest as before.

## 3. Inadequacy of coordination among local organization involved in the communities living around the forest.

By interviewing 6 members of the community forest committee, and 3 chairman of the Tambon Administration Organization under the jurisdiction of the Khok Yai community forest, it was found that there were no serious and formal meetings, or brainstorming between organizational communities such as schools, wats, and the community forest committee in relation to the community forest management. There were only conversations among some familiar and intimate groups only.

## **CHAPTER V**

### **DISCUSSIONS**

The investigation of People's Participation in the Community Forest Management: a case study of Khok Yai Community forest, Maharakham Province was to study levels of people's participation in the community forest management, and factors relating to the levels of the stated participation including problems and barriers related to people's participation in the community management. From results of Chapter 4, they could be discussed as follows:

#### **5.1 The Quantitative Studies**

##### **5.1.1 Levels of People's Participation in the Community Forest Management**

With the Hypothesis 1, it was found out that levels of people's participation rejected the assumption. It was likely resulted from the past records of people and leaders who lived around the forest in struggling to gain back the forest. This struggles were caused by sufferings and intrusion to gain rightful lands for earnings and planting the mono- economic crops promoted by the government agencies allowing the opportunity for people to reserve the Khok Yai public forest during BE 2504-2507, in association with during BE 2522, people preferred to cut woods for producing charcoal for selling and woods to the natural salt factory in districts of Borrabue, Wapeepathum and Nadoon. These deteriorated forest resulting the aridity and deluge to all paddy fields and also unable to cultivate the farming because of the salt products irrigate salt water into major fresh water sources. The leaders and people living around the forest were driven to be aware and to understand the problems and its after-effects. It stroke the people's more consciousness to grasp the significance of the forest and mobilized under the network of the Khok Yai community forest to

demonstrate their efforts to survive the Khok Yai forest (from the interviews of Mr. Boonrueng Yangkrue, chairman of the network of the Khok Yai community forest). It claimed that people wanted to participate in the management and securing the forest. It was observed from the measurement in participating of the community forest management, “You have ever participate in the meeting of the Khok Yai community forest.” Most samples sometimes participated reaching to 62.2%. Also, the content, “ Have you ever participated determining activities of the Khok Yai community forest?” Most samples sometimes participated reaching to 49.4%. “Whether have you ever participated setting action plans of the Khok Yai community forest?” Most samples sometimes participated reaching to 50.0%.

In summary, people moderately participated in the community forest management. Even it did not correspond with the hypothesis; however, it was in the satisfactory level for the researcher that at least people still share in the management and supervision of the community forest and did not leave responsibility to only the government agencies.

### **5.1.2 Factors Relating to Levels of People’s Participation in the Khok Yai Community Forest Management**

With the Hypothesis 2 - gender, age, education, number of family member, occupation, family annual income, duration of stay in the community, social status, news reception, the community forest exploitation, and the opinion of the community forest, had statistically significant relationship with the levels of people’s participation in Khok Yai community forest management at 0.05 level. The resulted could be discussed as follows:

#### **Gender**

The levels of people’s participation had statistically significant relationship with the gender at 0.05 level. It was referred to either female or male originated differences in the participation of the community forest management. It accepted the hypothesis on account of the Thai social and culture still admired the male of its significance. In particular, the socio-culture of the northeastern rural admired the male



to be the household head and leader in decision-making in all affairs. Participation in activities of community was therefore accommodating males to share and rather had more opportunity, which was corresponded with the research work of Paijit Traiwongyoi (BE 2538: Abstract) studying the people's participation in the community forest management: a case study of Ban Pa Lon, Tambon Pong Nong, Mae-jan District, Chiangrai Province, and found out that people gender generated statistically significant differences in people's participation in the community forest management at 0.01 level.

### **Age**

The levels of people's participation had no statistically significant relationship with the age at 0.05 level. Any ranges of ages did not generate any differences in the participation of the community forest management, which rejected the hypothesis. It was likely that people living around the forest were the expanded families where they lived for many generations. Different age groups had the opportunity to be intimate and shared more ideas in the community forest management leading to no differences in the participation of the community forest management. It corresponded with the research work of Suparaporn Dhammachart (BE 2542: Abstract) who studied the local people's participation in the preservation of the onshore resources: a case study of La-ngoo district, Satoon Province, and found out that age had no effects against local people's participation in the preservation of the onshore resources.

### **Education**

The levels of people's participation had statistically significant relationship with the education at 0.05 level. It was referred to that different education caused differences in the participation of the community forest management, which accepted the hypothesis. It was likely that education made people able to read, write and understand principles and practices in the in the participation of the community forest management. It was also that education or being educated affected individuals' visions in things to be in the correct direction and fit the actual situation. Education could unveil the individual worldview to employ the thinking process more analytically. It argued with the research of Suparaporn Dhammachart (BE 2542:

Abstract) who studied the local people's participation in the preservation of the onshore resources: a case study of La-ngoo district, Satoon Province, and found out that education had no effects against local people's participation in the preservation of the onshore resources.

### **Number of Family Member**

The levels of people's participation had no statistically significant relationship with the number of family member at 0.05 level. It was referred to that number of family member did not generate any differences in the participation of the community forest management, which rejected the hypothesis. This was because of people living around the forest were the expanded families, and members in the community both in the same and in other villages were connected as relatives and had intimacy. They were more associating, sharing, and transmitting ideas, incorporated with every community living around the forest daily organized meeting for discussion or reporting information among community members, it turned families either more or less members had been transmitted ideas of relative practices. These caused no differences in participation. It argued with the research of Walaiporn Dowsuwan (BE 2533: Abstract) who studied the local people's participation in the preservation of the environment of Bueng Khun Ta-lae, and found out that different number of family member differed the participation in the preservation of the environment of Bueng Khun Ta-lae with statistical significance at 0.01 level.

### **Occupation**

The levels of people's participation had no statistically significant relationship with the occupation at 0.05 level. It was referred to that different occupations did not generate any differences in the participation of the community forest management, which rejected the hypothesis. It was likely that people or 20 communities living around the forest were 94.4% being agriculturists and 5.6% were other occupations, which all were occupations inside the communities or the neighboring communities located around the Khok Yai forest. They had mutual and similar socio-culture and life styles. They were always associating, dialoguing, and sharing experiences as well as ideas. These caused no differences in thinking paradigm, and practices in relation

to participation. It argued with the research of Suparaporn Dhammachart (BE 2542: Abstract) who studied the local people's participation in the preservation of the onshore resources: a case study of La-ngoo district, Satoon Province, and found out that occupation affected local people's participation in the preservation of the onshore resources.

### **Income**

The levels of people's participation had no statistically significant relationship with the income at 0.05 level. It was referred to that different income did not generate any differences in the participation of the community forest management, which rejected the hypothesis. It was likely that social and culture of the communities around the Khok Yai forest were the societies of relatives with connection and mutual helps such as exchanges of food or token to show the trust, friendly and dependently staying. It was easy to ask for help whether being rich or poor and the supportive system was still effective. Income thus played no effect against the participation in the community forest management in associated with activities of participation in the community forest management needed no spending but only using collaboration in efforts and ideas. It argued with the research of Suphot Phongphisuddhibuppha (BE 2543: Abstract) who studied the civilian's participation in the preserving the community forest under the directions of monk: a case study of the Wat Chollapradhan Dhamri community forest, Tambon Soong-nern, Amphoe Kra-sang, Buriram Province, and found out that income of the household was a factor related to the participation in the preservation of the Chollapradhan Dhamri community forest with statistical significance.

### **Duration of Stay in Community**

The levels of people's participation had no statistically significant relationship with the duration of stay in community at 0.05 level. It was referred to that different duration of stay in community did not generate any differences in the participation of the community forest management, which rejected the hypothesis. It was likely that from the studies data and records of villages around the Khok Yai community forest, from documents and interviews the learned, it was found out that villagers migrated to

settle in these 20 villages were ethnic of Tai-Lao, who had the similar cultures and traditions. In the early settlement, they had adopted customs, traditions, and belief from the ancestors down to each generation since great grand parents till the young generations. Therefore, whether having any duration of stay, they would inherit the same heredity, where their culture and traditions were similar as well as acceptance to follow. It caused the duration of stay gained no difference in the participation of the community forest management. It corresponded with the research of Walaiporn Dowsuwan (BE 2533: Abstract) who studied the local people's participation in the preservation of the environment of Bueng Khun Ta-lae, and found out that different duration of stay in community did not affect against the participation in the preservation of the environment of Bueng Khun Ta-lae.

### **Social Status**

The levels of people's participation had statistically significant relationship with the social status at 0.05 level. It was referred to that different social status generated differences in the participation of the community forest management, which accepted the hypothesis. It was likely that most individual group with positions or the social status were the leaders of the group, such as the head of the tambon, the head of the village, the village committee, the community forest committee, and the Tambon Administration Organization. All these individual groups had ever been key leaders and mobilized to secure the Khok Yai community forest. In association with these leader groups were underlying with social sacrifices as well as accepting innovations and lived to see their communities developed (Jariya Na-sakul, BE 2535:20). It corresponded with the research of Walaiporn Dowsuwan (BE 2533: Abstract) who studied the local people's participation in the preservation of the environment of Bueng Khun Ta-lae, and found out that different social differed the participation in the preservation of the environment of Bueng Khun Ta-lae with statistical significance at 0.01 level.

### **News Reception in Relation to the Community Forest Management**

The levels of people's participation had statistically significant relationship with the news reception in relation to the community forest management at 0.05 level.

It was referred to that different news reception in relation to the community forest management generated differences in the participation of the community forest management, which accepted the hypothesis. It was likely that news reception resulted individuals to gain advanced knowledge as well as pro and cons of the participation in the community forest management. Roger (1973:45) had indicated the relationship between accepting new things and the communication process such as channels of communication, and factors related to personality as follows:

1. Personal Factors – age, social status, economic state, which included income, land size, ownership of land, and specialized discipline, which included the education.

2. The channels of communication, knowledge, and the communication process containing messengers, or message origin, channels of communication and recipients of message – It was likely be concluded that the process of communication influenced the increasing of knowledge, and able to change the attitudes of individuals affected more knowledge and more understanding and building more awareness among individuals and leading to participate activities of the communities.

It argued with the research of Chuenjai Buchadham (BE 2542:103-105) who studied the participation in preserving environment of the tourism operators in areas of Bang Saen Beach, Chonburi Province, and found out that factors of news reception related to environments had no relationship in participation of the preservation of the environment.

### **Knowledge**

The levels of people's participation had statistically significant relationship with the knowledge at 0.05 level. It was referred to that different knowledge generated differences in the participation of the community forest management, which accepted the hypothesis. It was likely that knowledge was a factor in communication process, which influenced the increase of knowledge, and able to change the attitudes of individuals should result the better knowledge and understanding as well as awareness leading to the participation in activities in the communities. For example, in the content 5, which asked, "the guarding of the Khok Yai community forest is for

winning the contest and fame of the villages.” 89.2% answered correctly while 10.8% answered wrongly.

The content 6 asked, “best benefits in guarding the community forest must have planning in management, determining activities in guarding, and controlling the operations by the community people.” 90.3% of sample answered correctly, while 9.7% answered wrongly. With the Content 5, it showed that with a level of knowledge leading to correct answer. Also, in Content 6 – samples with increased knowledge in a level would know and answer if to guard the forest for the best benefit was not only for winning the contest but also there should be planning in management and determine activities in guarding the forest and control the operation by the people in the community. It showed that the increase knowledge and understanding would build more awareness leading to the activities of more participation in the community forest management. It corresponded with the research of Pisan Dhanasarn-somboon (BE 2542: Ngor) who studied the local people’s participation on the environmental preservation of Arts: a case study of Si Chang Island, Chonburi Province, and found out that knowledge in preserving art environment was the factor affecting the participation in preserving art environment with the statistical significance at 0.05 level.

### **Community Forest Exploitation**

The levels of people’s participation had no statistically significant relationship with the community forest exploitation at 0.05 level. It was referred to that different community forest exploitation did not generate any differences in the participation of the community forest management, which rejected the hypothesis. It was likely that the researcher entered the fieldwork on data collection and experienced the life style of people as well as the forest ecological system, which produced plantations, crops, and herbs those supported living creatures and people around the forest. The portrayal of villagers entering the forest to find local greens bamboo shoots, ants’ egg and many others surplus forest products for exploitations to contribute to neighboring provinces and sold for added income. Therefore, entering forest for exploitation, forest finding, collecting firewood and others were counted simple living style since ancestors, and great grand parents. From interviewing villagers entering the Khok Yai

forest for exploitation, they all answered, “ every people owns everything in the forest because the community forest is for people. Everyone guarding the forest can enter for exploitation under the agreed regulations with no accusations.” It resulted that there were no differences or relationship between the community forest exploitations and the participation of the community forest management. It argued with the research of Panida Wimarnrat (BE 2543: 108) who studied the participation of members of the Tambon Administration Organization in Relative to the Environmental Preservation: a case study of Bueng Borra Petch , Nakhonsawan Province, and found out that the exploitation from Bueng Borra Petch had statistical significance effect against the level of participation at 0.01 level.

### **Opinions**

The levels of people’s participation had statistically significant relationship with the opinions at 0.05 level. It was referred to that different opinions generated differences in the participation of the community forest management, which accepted the hypothesis. It was likely caused that personal opinions were the expressions of belief or sensation or discretion on what directions to take. The studied group positively expressed to strongly participate in the community forest management. For example, in the Content 2, “The local people hold common rights to guard and exploit the community forest”, where 94.0% of the samples agreed. It led this opinion to implementation in the direction of participating in the community forest management according to the state of social, culture, and belief of the local people. TI argued with the research of Sopsook Leelabutr (BE 2543:99-100) who studied the local people’s participation in the environmental preservation: a case study of Kor Kred, Nonthaburi Province, and found out that opinions had no statistical significance effect in the participation of the environmental preservation in Kor Kred at 0.05 level.

## **5.2 The Qualitative Studies**

In the qualitative studies, the researcher had conducted the in-depth interviewed 6 administrative committee members of the Khok Yai community forest, and 3 chairman from the Tambon Administration Organization located around the Khok Yai community forest. Following issues were investigated i.e. the social status,

and economy of people living around the Khok Yai community forest, including problems of resources in the Khok Yai community forest as well as the participation of the community forest management. They were discussed as follows:

Currently, conditions of the natural resources from the forest, the natural plantations and wildlife in the vicinity of the Khok Yai forest were rich and the ecological systems were returning. People residing around the forest had better living. Cultures of finding forest vegetables and firewood of the past great grand parents were returning to the locality. All love and care in the natural resources of the forest. However, at the meantime, the local people perceived that at the moment the Khok Yai community forest was facing the problems of being intruded by people from other localities, who did not even guarding but taking advantages without permission as well as did not follow the set criteria of communities located around the forest. It also included the forest flames, the intrusion of people having lands for living adjoining the forest expanding their pieces of land into the forest. Besides, people living around the forest expected that the community forest committee would settle such problems, particularly, the budget allocated by the government and private sectors supporting and enhancing the participation process of the local people to guard and to preserve the community forest. There were conflicts within communities and people were unlikely to participate as before, which gradually brought the levels of people's participation down. If such problems had not been handled, in the future, the natural resources of the Khok Yai community forest would have been destroyed and unguarded from people living around the forest but surely deforested by them as before.

## **CHAPTER VI**

### **CONCLUSIONS AND RECOMMENDATIONS**

Contemplating the policy of forest, “Forest management” was popular among forestry academicians that it was so hard to satisfactorily achieved. Since Thailand had announce the Plan 1 of the National Economic and Social Development in BE 2504 when the natural resources had been wastefully used, particularly the forestry resources, which was used as the production-based that caused drastically reducing areas of forests apparently affecting lifestyles of the people, and ecology. Whatsoever, government in each period exercised strategies in managing forest to reduce intrusion and illegal limbering, it was still found the decreasing forest areas each year.

From the studies of the forestry policy of the 2 previous governments, it was found that authority in the managing the forest was by the government under the Forestry Department, and the Ministry of Agriculture and Cooperative on management and supervision. The concept was that forest belongs to the state and no one was allow any intrusion by announcing to be the National Park, the wildlife preservation areas, or the national preserved park. Still, problems were unlikely handled and sometimes caused conflicts between the government officials and people in many areas.

Currently, however, there were new concepts of forestry management to allow local people participating in the management vexing that “human” was potential in preservations and the local people were able to sustainable managing the forest. This was the concept of “the community forest”. The researcher was interested to investigate the process of local people’s participation in the community forest management on the basis that the participation was likely a key factor to achieve effective and sustainable management of the community forest. The study was concentrated on the Khok Yai community forest, which was counted highly interesting the people’s participation in the community forest management. Also, the

objectives were to investigate the levels of participation, and factors relating the people's participation in the community forest management. Research results would be as approaches in planning to promote the policy of the community forest management for in order to guarding the rest of the forest areas to be free from destructive intrusion by the people living around the forest and the neighboring areas. They were likely precisely and properly applicable to the other areas with similar social conditions resulting the further sustainable preservation of the forestry resources in future.

A survey and a qualitative research was conducted using questionnaire with the people living around the Khok Yai community forest who were 360 household heads or marriage couples. The In-depth interview was conducted with 6 administrative committee members of the network of the Khok Yai community forest, and 3 chairman of the Tambon Administration Organization. APSS/PC+ was used in data analyses employing statistical percentage, mean, standard deviation, frequency, and Chi-square to test the relationship of the independent variables and the dependent variables. Conclusions and recommendations were as follows:

## 6.1 Conclusions of Quantitative Research

### Population Data and General Data

It was found out that 59.4% were mostly male, with the age of 40-49 years or 34.7%. Most earned the primary level or 74.4% and accommodating family members of 1-5 persons or 82.2%. Most occupation was paddy farm or 91.1% earning the annual income of 10,001-20,000 Baht or 36.1%. Most lived in the community for 40-49 years or 23.9% and having social status of only 34.1%, but mostly no social status of 55.8%. 96.1% had received message of the community forest mostly from the leader of the community and most exploited the community forest or 98.6% by collecting forest products.

1. *Objective 1* – to investigate levels of people's participation in the community forest management.

Hypothesis 1: People had high participation. It was found out that they had moderate participation and the hypothesis was rejected.

2. Objective 2 – to investigate factors relating with the people 's participation in the Khok Yai community forest management.

Hypothesis 2: the gender, the age, the education, the number of family member, the occupation, the family annual income, the duration of stay in the community, the social status, the news reception of community forest, the community forest exploitation, the knowledge of community forest, and the opinions of the community forest management had statistically significant relationship with the participation in the community forest management at 0.05 level.

It was concluded that factors statistically significant relating with the level of people's participation in the community forest management at 0.05 level were the gender, education, the education, the social status, the news reception of community forest, the community forest exploitation, the knowledge of community forest, and the opinions of the community forest management. They were corresponded with the hypothesis

At the meantime, the age, the number of family member, the occupation, the family annual income, the duration of stay in the community, and the community forest exploitation had no statistically significant relationship with the level of people's participation in the community forest management. The hypothesis was therefore rejected

## **6.2 Conclusions of Quantitative Research**

### **6.2.1 The Social and Economic Conditions of People Living around the Khok Yai Community Forest**

There were 2 natures of most families, i.e. the single family and the expanded family with a male as the household head being the leader of both in

thinking and the decision-making, as well as family problems solving. The major occupation was agriculture, or the yearly paddy crops of the natural rain dependency. The earning was 15,000-20,000 Baht per family per year. Some families cultivated tapioca and cassava besides paddy crops and using 5-10 rais in cultivation to add another 3,000-5,000 Baht to the annual income. Also, another key source of income for those living near the forest was the collection of the forest products, particularly the mushroom, which could earn another 500-1,000 Baht to the income. However, those habitually collected mushrooms might earn by average a 10,000 Baht per year. It was further found out that among 20 villages, there were migrations of workforces into cities and another provinces. The youth would seek job in the industrial factories, companies, and shops in Bangkok whereas the adults with family would migrate into Bangkok seeking for construction job and general employment.

### **6.2.2 Problems of the Natural Resource Exploitation in the Khok Yai Community Forest**

Currently, there were 2 problems related to the natural resources in the Khok Yai community forest, i.e.

1. The illegal timbering, the herbal plants and wildlife hunting from outsiders
2. Forest flames blazed by human and the nature

### **6.2.3 Problems of People's Participation in the Community Forest Management**

There are 3 issues, i.e.

1. Conflicts between villagers and the committee of the community forest management
2. Inadequacy of the knowledge and understanding on the policy of the community forest

6.3.1 It was found out that people living around the forest and owning land for living around the Khok Yai community forest had moderate participation in the community forest management. Even it was likely satisfactory to a level as mentioned above., however, the 9 in-depth interviews with the local leaders and some sample responding the questionnaire, it was found out that some disagreed and saw no significance in having the community forest on account of the inadequacy of benefits. For example, unable to freely cut woods, which must be approved by the committee of the community forest as well as able to timber under restrict number and size. Otherwise, some people settling near the Khok Yai community forest had reserved land for living in the community forest area by intrusion and deforestation due to there were no clear boundary. Besides, the participation of local organizations was still inadequate with regards to coordination as well as the meeting to discuss problems and brainstorming. (There were never been meeting among the local leaders).

People involved with the community forest management either leaders of any formal or nonformula groups should therefore organize meeting and publicize for all people to acknowledge and to perceive the significance of owning the community forest, and the participation in guarding and preserving the forest resources in the community forest in forms of training, publicizing through the broadcasting tower. Also, the government sectors should play roles in enhancing the participation process of the local leaders within the communities in forms of fieldwork training that the groups of the local leaders understood and were cultivated the development process in the enduring participation in the community forest management in future.

6.3.2 It was foundout that education had relationship with the state participation, i.e. different education differently affected the participation in the community forest management. Units or individual groups involved should therefore more campaign and publicize the knowledge of the preservation and the community forest management.

6.3.3 It was found out that some people were inadequate of knowledge in relation to the correct community forest management. Observing from the knowledge test on, "Only the forestry staff of Wapeepathum district and of the Mahasarakham province hold duty to determine ways in supervising and guarding the Khok Yai

more campaign and publicize the knowledge of the preservation and the community forest management.

6.3.3 It was found out that some people were inadequate of knowledge in relation to the correct community forest management. Observing from the knowledge test on, "Only the forestry staff of Wapeepathum district and of the Mahasarakham province hold duty to determine ways in supervising and guarding the Khok Yai community forest." 40.0% of the samples incorrectly responded. Another content of, "Major factor to achieve the forestation of the community forest is the supervision of the government officials." 63.6% of the sample incorrectly responded. Also, "all people are able to exploit the community forest without following the rules and regulation of the community forests." 22.5% of samples incorrect responded. The campaign to provide knowledge for people should therefore be emphasized people to realize and to understand the Constitution BE 2540 focusing on people's participation in managing and supervising local resources and not leaving it only to the government officials.

6.3.4 It was found out that some people tended not to participate with the community forest management. It was observed from the participation in attending the meeting related to the Khok Yai community forest that 25.0% never attended and only 12.0% attended every meeting. When there was meeting on the community forest management, it was found out that most samples or 33.6% never made comments. When there was meeting of planning related to the Khok Yai community forest it was found out that most samples or 38.6% never attended, and only 11.4% always attended. When there was offending against the rules and regulations of the community forest exploitation and determining the punishment, it was found out that 54.4% of the samples never attended in the participation of determining the punishment of the offenders. 65.3% of the samples never participated in guarding the community forest, and 43.1% never pursued and evaluated the performance of the committee of the Khok Yai community forest. Therefore, to enhance people's participation in the community forest management should be campaigned the significance of the groups toward the participation in the community forest management in each step, i.e. participation of problem analyses, planning, sharing

should be asked for analyses in order to plan further campaign and solution of problems.

(2) Allowing more opened opportunity for all people to participate in planning for management and not to be restricted within any groups.

(3) Enhancing the understanding among the groups of disagreeing and not understanding of owning the community forest to see the significance and cultivating the awareness of values and genuine benefits of the community forest.

#### **6.4 Recommendations for Further Studies**

6.4.1 Comparative studies should be conducted in relation to the people's participation in the community forest management with other communities who are the common network of the community forest such as the Khok Hin How community forest and so on.

6.4.2 Local intellectual applications in making used of the community forest should be studied for the purpose that what types of local intellectuals could be used for sustainable preservation and for the forest rehabilitation as well as to encourage the villagers for further implementation.

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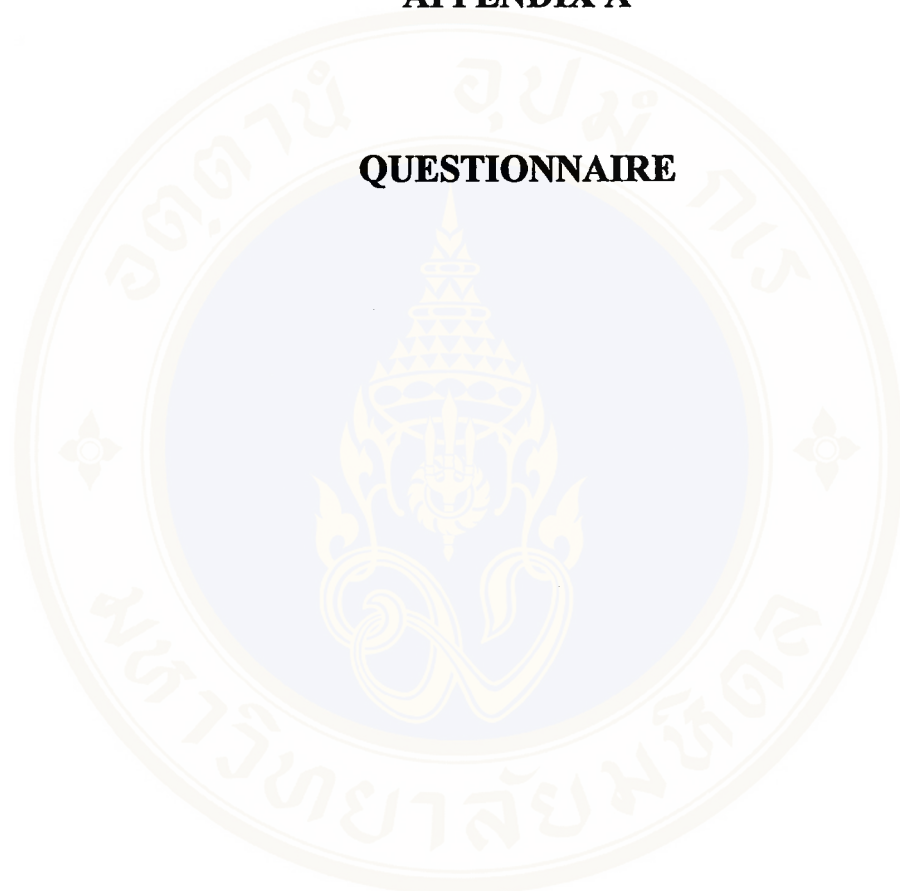
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**APPENDIX A**

**QUESTIONNAIRE**



## แบบสอบถาม

หมายเลขแบบสอบถาม V1□□□

## การมีส่วนร่วมของประชาชน ในการจัดการป่าชุมชนโลกใหญ่

## ส่วนที่ 1

**คำชี้แจง:** โปรดกา  ลงใน  หน้าข้อความที่ตรงกับความจริง หรือเติมข้อความตามความเป็นจริง ลงในช่องว่าง

1. เพศ  ชาย  หญิง

V2□

2. อายุ .....ปี (นับจำนวนปีเต็ม)

V3□□

3. ระดับการศึกษาสูงสุด  ไม่ได้เรียนหนังสือ

V4□

 ประถมศึกษา มัธยมศึกษาตอนต้น มัธยมศึกษาตอนปลาย/ปวช หรือเทียบเท่า อนุปริญญา/ปวท หรือเทียบเท่า ปริญญาตรี สูงกว่าปริญญาตรี

4. สถานภาพสมรส  โสด  คู่

V5□

 หม้าย /หย่า /แยก

5. จำนวนสมาชิกในครัวเรือน .....คน (นับเฉพาะผู้ที่อยู่ประจำ)

V6□□

6. อาชีพหลัก (อาชีพที่ใช้เวลาในการประกอบอาชีพเป็นส่วนใหญ่)

V7□

 ทำนา  ทำไร่/ทำสวน

- รับจ้างทั่วไป
- ค้าขาย
- ลูกจ้างบริษัท/ รัฐวิสาหกิจ
- รับราชการ
- อื่นๆ

7. รายได้ครอบครัวต่อปี.....บาท

V8

8. ระยะเวลาที่อาศัยอยู่ในชุมชน.....ปี

V9

9. สถานภาพทางสังคม

ไม่มี

V10

- ผู้นำชุมชน (ผู้ใหญ่บ้าน , ผู้ช่วยฯ,กำนัน ,สารวัตรกำนัน. )
- อบต.
- กรรมการป่าชุมชน/กรรมการหมู่บ้าน
- อื่นๆ (ระบุ).....

10. ระยะจากบ้าน ถึงป่าชุมชน.....เมตร

V11

11. ท่านได้ใช้ประโยชน์จากป่าชุมชนในเรื่องใดบ้าง

V12

- ไม่เคยใช้เลย
- การใช้ไม้ในการสร้างบ้าน
- การเก็บหาของป่า เช่น เห็ด หน่อไม้ เป็นต้น
- ใช้ในการศึกษา หรือ วิจัย
- อื่นๆ (ระบุ).....

12 ท่านเคยได้รับข้อมูลข่าวสารเกี่ยวกับป่าชุมชนจากใครบ้าง ? ทางสื่อใด ? (ตอบได้มากกว่า 1 ข้อ)

ไม่เคย

V13

- ผู้นำชุมชน(กำนัน,สารวัตรกำนัน,ผู้ใหญ่บ้าน,ผู้ช่วยฯ)
- อบต.
- เพื่อนบ้าน
- องค์กรเอกชน
- เจ้าหน้าที่ป่าไม้
- วิทยุ,โทรทัศน์
- หอกระจายข่าวหมู่บ้าน

## ส่วนที่ 2 ความรู้ในเรื่องป่าชุมชน

คำชี้แจง : โปรดกา  ลงใน ช่องว่าง หน้าข้อความที่ตรงกับความจริง ที่ท่าน ได้รู้และเข้าใจในเรื่องต่อไปนี เพียง 1 ช่อง

ข้อความ	ใช่	ไม่ใช่
1. ป่าชุมชน หมายถึง พื้นที่ป่าที่กำหนดไว้ว่าเป็นของชุมชน มีการดูแล และรักษาไว้เพื่อประโยชน์ของคนในชุมชน		<input type="checkbox"/>
2. เมื่อเป็นป่าชุมชนแล้ว ชาวบ้านทุกคนมีสิทธิในการตัดไม้ เก็บหาของป่าพวกสมุนไพร อาหารและสัตว์ป่าได้ ตามความต้องการ โดยไม่มีใครว่า		<input type="checkbox"/>
3. ประชาชนหรือชุมชนที่อยู่อาศัยในพื้นที่รอบผืนป่าชุมชน ควรมีส่วนร่วมโดยตรงการดูแลรักษาป่าชุมชน		<input type="checkbox"/>
4. ผู้ที่ดูแลรักษาป่าชุมชนที่ดีที่สุดคือ ประชาชนที่อาศัยอยู่รอบผืนป่าทุกๆคน ร่วมกับเจ้าหน้าที่ของรัฐ		<input type="checkbox"/>
5. การรักษาป่าชุมชน โศกใหญ่ เพียงเพื่อชนะการประกวด และชื่อเสียงของหมู่บ้านเท่านั้น		<input type="checkbox"/>
6. การรักษาป่าชุมชน เพื่อให้เกิดประโยชน์มากที่สุด ต้องมีการวางแผน ในการจัดการ กำหนดกิจกรรมในการดูแลรักษา และควบคุมการดำเนินงาน โดยประชาชนในชุมชน		<input type="checkbox"/>
7. เจ้าหน้าที่ป่าไม้ อำเภอบางบาล และป่าไม้จังหวัดมหาสารคามเท่านั้น ที่มีหน้าที่กำหนดแนวทางในการดูแล และรักษาป่าชุมชน โศกใหญ่		<input type="checkbox"/>
8. การดูแลรักษาป่าชุมชน เป็นหน้าที่ของรัฐเท่านั้น ประชาชนไม่ควรเข้าไปเกี่ยวข้อง		<input type="checkbox"/>

ข้อความ	ใช่	ไม่ใช่
9.การป้องกันและทำแนวกันไฟป่า เป็นเป็นส่วนหนึ่งของการดูแลและรักษาป่าชุมชน		
<p>10. เมื่อพบมีการลักลอบตัดไม้ ในเขตป่าชุมชน เราควรแจ้งกำนัน ผู้ใหญ่บ้าน หรือคณะกรรมการป่าชุมชน</p> <p>11. ประชาชนสามารถเข้าไปจับจองพื้นที่เพื่อทำไร่ ปลูกพืช ในเขตป่าชุมชน โกงใหญ่ได้โดยเสรี</p> <p>12. การจัดการป่าชุมชนในพื้นที่ป่าแต่ละแห่ง อาจแตกต่างกันไปตามสภาพพื้นที่และวัฒนธรรม</p> <p>13. กฎระเบียบของป่าชุมชนควรถูกกำหนดขึ้น โดยประชาชนในชุมชน</p> <p>14. การตัดไม้ทำลายป่าส่งผลกระทบต่อ การดำรงชีวิตของคนในชุมชน</p> <p>15. ประชาชนทุกคน สามารถใช้ประโยชน์จากป่าชุมชนได้โดยไม่ต้องปฏิบัติตามกฎระเบียบของป่าชุมชนนั้นๆ</p> <p>16. การดูแลรักษาป่าชุมชน โกงใหญ่ รวมถึงการอนุรักษ์ดิน น้ำ และสัตว์ป่า ในเขตป่าชุมชนด้วย</p> <p>17. หากคนในชุมชน ลักลอบตัดไม้ในเขตป่าชุมชน จะไม่มีการลงโทษตามกฎระเบียบของป่าชุมชน</p> <p>18. พระราชบัญญัติป่าชุมชนที่กำลังอยู่ในระหว่างดำเนินการนี้ จะประสบความสำเร็จ ก็ต่อเมื่อ คำนึงถึงประโยชน์ของป่า และการใช้ประโยชน์</p> <p>19. ปัจจัยสำคัญที่จะทำให้โครงการปลูกป่าชุมชนประสบความสำเร็จคือ การตรวจตราดูแลของเจ้าหน้าที่ของรัฐ</p> <p>20. ประโยชน์ของป่าไม้ คือ เป็นแหล่งดูดซับน้ำฝน และทำให้ฝนตกต้องตามฤดูกาล</p>		<p><input type="checkbox"/></p> <p><input type="checkbox"/></p> <p><input type="checkbox"/></p> <p><input type="checkbox"/></p> <p><input type="checkbox"/></p> <p><input type="checkbox"/></p> <p><input type="checkbox"/></p> <p><input type="checkbox"/></p> <p><input type="checkbox"/></p> <p><input type="checkbox"/></p> <p><input type="checkbox"/></p> <p><input type="checkbox"/></p> <p><input type="checkbox"/></p> <p><input type="checkbox"/></p>

## ส่วนที่ 3 ความคิดเห็นเกี่ยวกับการจัดการป่าชุมชน

คำชี้แจง: โปรดกา ✓ ลงในช่องว่าง ที่ตรงกับความคิดเห็นของท่านในเรื่องต่อไปนี้ เพียง 1 ช่อง

ข้อความ	ความคิดเห็น		
	เห็น ด้วย	ไม่ แน่ใจ	ไม่เห็น ด้วย
1. ป่าชุมชนเป็นทรัพยากรธรรมชาติ ที่มีประโยชน์ต่อวิถีชีวิต ของคนในชุมชน			<input type="checkbox"/>
2. ประชาชนในท้องถิ่น มีสิทธิร่วมกัน ในการดูแลรักษา และ ใช้ประโยชน์จากป่าชุมชน			<input type="checkbox"/>
3. ชาวบ้านทุกคนควรมีส่วนในการ ในการจัดการป่าชุมชน ร่วมกัน			<input type="checkbox"/>
4. กรรมการป่าชุมชน ไม่ควรเข้มงวด หรือจัดการตัดไม้ใน เขตป่าชุมชนมากนัก			<input type="checkbox"/>
5. การจัดการป่าไม้โดยชุมชน เป็นวิธีการรักษาป่าที่เหมาะสม กับสถานการณ์ปัจจุบัน			<input type="checkbox"/>
6. ไม้ในป่าชุมชน เป็นของสาธารณะ ใครๆ ก็สามารถตัดไป ใช้ได้			<input type="checkbox"/>
7. การเก็บหาของป่า และการล่าสัตว์ในเขตป่าชุมชน ทุกคน ในชุมชนสามารถทำได้ โดยไม่มีข้อจำกัด			<input type="checkbox"/>
8. ป่าชุมชน เป็นสิทธิร่วมกันของประชาชนในท้องถิ่น			<input type="checkbox"/>
9. การจุดไฟล่าสัตว์ป่า ในป่าชุมชนเป็นเรื่องปกติธรรมดา			<input type="checkbox"/>
10. การให้ประชาชนในท้องถิ่นจัดการป่าชุมชนเอง ปัญหา การตัดไม้ทำลายป่าลดลง			<input type="checkbox"/>

ข้อความ	ความคิดเห็น		
	เห็นด้วย	ไม่เห็นด้วย	ไม่เห็นด้วย
11. ประชาชนสามารถตัดไม้ และเก็บหาของป่า ในป่าชุมชน เพื่อนำมาเป็นรายได้ ของครอบครัวได้ หากอยู่ในกฎระเบียบของการใช้ประโยชน์จากป่า ที่ชุมชนกำหนดไว้			<input type="checkbox"/>
12. การตัดไม้ทำลายป่า เป็นเรื่องที่หลีกเลี่ยงไม่ได้ และไม่เป็นเรื่องเสียหาย			<input type="checkbox"/>
13. การฟื้นฟูป่าชุมชน ควรเป็นหน้าที่ของเจ้าหน้าที่ป่าไม้ อบต. และเกษตรอำเภอเท่านั้น			<input type="checkbox"/>
14. การใช้ประโยชน์จากป่าชุมชน ไม่เป็นเรื่องเสียหาย หากมีการจัดการ หรือการควบคุมที่ดี โดยชุมชน			<input type="checkbox"/>
15. การให้ประชาชนได้มีการเรียนรู้ และรับทราบถึงปัญหารวมทั้งผลเสียของการตัดไม้ทำลายป่า ทำให้ป่าไม้ถูกทำลายน้อยลง			<input type="checkbox"/>
16. การดำเนินชีวิตในปัจจุบัน ควรคำนึงถึงรายได้ตัวเองมากกว่าการมีป่าชุมชน			<input type="checkbox"/>
17. ควรให้มีการปลูกป่า ในพื้นที่ป่าชุมชนเสื่อมโทรม และพื้นที่สาธารณะทุกพื้นที่			<input type="checkbox"/>
18. ควรให้มีการปลูกต้นไม้ทดแทนทุกครั้ง ที่มีการตัดไม้ในป่าชุมชน			<input type="checkbox"/>
19. การทำลายป่าไม้ เท่ากับเป็นการทำลายทรัพยากรดิน น้ำ และสัตว์ป่า ในเวลาเดียวกัน			<input type="checkbox"/>
20. การให้ประชาชนในท้องถิ่น จัดการป่าชุมชนด้วยตนเอง เป็นสิทธิชุมชนขั้นพื้นฐานที่สามารถทำได้			<input type="checkbox"/>

ส่วนที่ 4 การมีส่วนร่วมของประชาชนในการจัดการป่าชุมชน ในรอบ 1 ปีที่ผ่านมา

คำชี้แจง : โปรดกา  $\surd$  ลงในช่องว่าง ที่ตรงกับกรปฏิบัติของท่านมากที่สุด เพียง 1 ช่อง โดยมีเกณฑ์ดังนี้คือ

ทุกครั้ง	หมายถึง	ทุกครั้งที่มีกิจกรรม
บางครั้ง	หมายถึง	ร่วมกิจกรรมบ้าง ไม่รวมบ้าง
ไม่เคยเลย	หมายถึง	ไม่เคยร่วมกิจกรรมเลย

ข้อความ	ความถี่			
	ทุกครั้ง	บางครั้ง	ไม่เคยเลย	
1. ท่านเคยร่วมประชุมเกี่ยวกับป่าชุมชน โลกใหญ่				<input type="checkbox"/>
2. ท่านเคยร่วมแสดงความคิดเห็น เกี่ยวกับการจัดการป่าชุมชน โลกใหญ่				<input type="checkbox"/>
3. ท่านเคยร่วมประชุมเกี่ยวกับการแก้ไขปัญหาป่าชุมชน โลกใหญ่				<input type="checkbox"/>
4. เวลาการประชุม ท่านเข้าไปนั่งเพียงอย่างเดียว				<input type="checkbox"/>
5. ในการประชุมเกี่ยวกับป่าชุมชน โลกใหญ่ ท่านเคยมีความคิดเห็นแย้งกับแกนนำ				<input type="checkbox"/>
6. หลังการประชุม ท่านเคยประท้วงแกนนำ เกี่ยวกับเรื่องที่ท่านไม่เห็นด้วย				<input type="checkbox"/>
7. ในการประชุม แกนนำได้ให้โอกาสในการเสนอความคิดเห็น				<input type="checkbox"/>
8. ท่านเคยร่วมเป็นกรรมการประสานงาน ในเรื่องเกี่ยวกับป่าชุมชน โลกใหญ่				<input type="checkbox"/>
9. ท่านเคยมีส่วนร่วมในการกำหนดกิจกรรมเกี่ยวกับป่าชุมชน โลกใหญ่				<input type="checkbox"/>

ข้อความ	ความถี่			
	ทุกครั้ง	บางครั้ง	ไม่เคย เลย	
10. ท่านเคยมีส่วนร่วมในการวางแผนงานเกี่ยวกับป่าชุมชน โลกใหญ่				<input type="checkbox"/>
11. ท่านเคยมีส่วนร่วมในการในการกำหนดบทลงโทษสำหรับผู้ฝ่าฝืนกฎระเบียบของป่าชุมชน โลกใหญ่				<input type="checkbox"/>
12. ท่านเคยมีส่วนร่วมในการ ปักเขตป่าชุมชน				<input type="checkbox"/>
13. ท่านเคยมีส่วนร่วมในการบวชต้นไม้				<input type="checkbox"/>
14. ท่านเคยร่วมต่อต้านสัมปทานป่าไม้				<input type="checkbox"/>
15. ท่านเคยร่วมอยู่เวรยาม เพื่อดูแล ป้องกัน ไฟป่า				<input type="checkbox"/>
16. ท่านเคยห้าม ตักเตื่อน หรือตัดขวาง ผู้ลักลอบตัดไม้ในเขตป่าชุมชนของท่าน				<input type="checkbox"/>
17. ท่านเคยมีส่วนร่วมในการติดตามดูความเจริญเติบโตของต้นไม้ที่ปลูกเสริม				<input type="checkbox"/>
18. ท่านเคยมีส่วนร่วมในการต้อนรับผู้ที่มาดูงานป่าชุมชน โลกใหญ่				<input type="checkbox"/>
19. ท่านเคยร่วม ติดตามการเปลี่ยนแปลงของป่าชุมชนของท่าน				<input type="checkbox"/>
20. ท่านเคยร่วม ในการติดตามตรวจสอบ การทำงานของคณะกรรมการป่าชุมชน โลกใหญ่				<input type="checkbox"/>
				<input type="checkbox"/>

**ส่วนที่ 5 ปัญหาอุปสรรค แนวทางในการแก้ไขปัญหา และแผนในการจัดการป้าชุมชน**

**1. ที่ผ่านมามหาหมู่บ้านของท่าน ประสบปัญหา หรือ อุปสรรคในการจัดการป้าชุมชนในเรื่องใดบ้าง**

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**2. ในการจัดการป้าชุมชนของหมู่บ้าน ท่านมีแผนงานหรือไม่ อย่างไรบ้าง**

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**3. ท่านมีแนวทาง และข้อเสนอแนะในการจัดการป้าชุมชน ในชุมชนของท่านอย่างไรบ้าง**

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**APPENDIX B**

**IN-DEPTH INTERVIEWS**



## แนวทางการสัมภาษณ์แบบเจาะลึก

ผู้วิจัยได้จัดทำแนวคำถามในการสัมภาษณ์ข้อมูลจากประชากรที่ศึกษา เป็น 2 กลุ่ม คือ

- ประธานองค์การบริหารส่วนตำบล
- คณะกรรมการบริหารป่าชุมชนโคกใหญ่

### ส่วนที่ 1 คำถามเกี่ยวกับตัวผู้ให้สัมภาษณ์

- 1 บอกชื่อ-นามสกุล
- 2 บอกอายุ
- 3 บอกสถานที่ทำงาน

### ส่วนที่ 2 สถานภาพทางสังคม เศรษฐกิจของประชาชนที่อยู่รอบๆป่าชุมชนโคกใหญ่

- 1 บอกลักษณะของครอบครัวของประชาชนส่วนใหญ่
- 2 ในปีหนึ่งๆ ประชาชนส่วนใหญ่ต้องทำงานกันตลอดทั้งปีหรือไม่พอมีเวลาวางช่วงไหนช่วงว่างทำกิจกรรมอะไร
- 3 คนส่วนใหญ่ จัดว่ามีฐานะเป็นอย่างไร เช่น พอมีพอกิน ยากจน หรือ ยากจนมาก

### ส่วนที่ 3 ปัญหาการใช้ทรัพยากรธรรมชาติในป่าชุมชนโคกใหญ่

- 1 บอกสภาพป่าชุมชน โคกใหญ่ ในอดีตและในปัจจุบัน
- 2 บอกการใช้ประโยชน์จากป่าชุมชน มีกฎเกณฑ์การใช้หรือไม่
- 3 บอกรูปแบบในการกำหนด กฎเกณฑ์ ว่าเป็นอย่างไร

### ส่วนที่ 4 ปัญหาการมีส่วนร่วมของประชาชนในการจัดการป่าชุมชนโคกใหญ่

- 1 มีแผนงานและ โครงการเกี่ยวกับการจัดการป่าชุมชนหรือไม่ ถ้ามี เป็นอย่างไร
- 2 องค์กรต่างๆที่เกี่ยวข้องมีส่วนร่วมในการคิดตัดสินใจ และร่วมวางแผนในการจัดการด้วยหรือไม่
- 3 มีปัญหาอะไรบ้างในการในการจัดการป่าชุมชน
- 4 มีประชาชนและกลุ่มองค์กรต่างๆในชุมชนร่วมในกิจกรรมการดูแลและอนุรักษ์ป่ามากน้อยเพียงใด

## BIOGRAPHY

<b>Name</b>	Miss Npha Krissadaruangsri
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