

Community Involvement Mechanism of Ecotourism in Thailand National Park: A Case study on Doi Inthanon National Park

กลไกการมีส่วนร่วมของชุมชนในการท่องเที่ยวเชิงนิเวศในอุทยานแห่งชาติไทย:กรณีศึกษาอุทยานแห่งชาติดอยอินทนนท์

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Abstract

Ecotourism is one of the sectors that is fastest growing globally, including Thailand. The government has developed its national parks and marine parks to be prime destination for ecotourism. Ecotourism became an important element in generating income for the country due to its potential in offering opportunity to the local people. Its not only sustain the conservation of the environment, but also improve the welfare and socioeconomic of local people. This paper highlights on the community involvement mechanism in ecotourism of Doi Inthanon National Park, and to study relationship between community and community involvement in ecotourism. Despite of in-depth involving interviewees from communities, national Park, local state agencies, NGOs and tourism companies, then the data will be analyzed by using content analysis. A questionnaire survey of about 302 household living within Doi Inthanon National Park were collected, data were analyzed by a percentage, average and standard deviation. Testing the hypothesis by using the Analysis of Variance (ANOVA). The paper recommends that the community involvement in ecotourism in Doi Inthanon National Park is moderate. This paper recommends that the authorities to provide need-based training and establish a proper management to encourage local peoples optimize the benefit from ecotourism in Doi Inthanon National Park.

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Key words: Ecotourism, Community involvement, Doi Inthanon National Park

บทคัดย่อ

การท่องเที่ยวเชิงนิเวศคือหนึ่งในภาคส่วนที่มีความเติบโตอย่างรวดเร็วที่สุดในโลก รวมถึงในประเทศไทย ด้วยเช่นกัน ภาครัฐบาลได้พัฒนาอุทยานแห่งชาติและอุทยานทางทะเลให้เป็นแหล่งท่องเที่ยวเชิงนิเวศที่สำคัญ การท่องเที่ยวเชิงนิเวศก้าวเข้ามาเป็นปัจจัยสำคัญในการสร้างรายได้ของประเทศ โดยนำเสนอศักยภาพของชุมชนท้องถิ่น ซึ่งไม่เพียงแต่ส่งผลต่อความยั่งยืนในการอนุรักษ์ทรัพยากรธรรมชาติ แต่ยังนำสู่การปรับปรุงสวัสดิการและสังคมของชุมชนท้องถิ่น การศึกษานี้เพื่อศึกษาผลกระทบการมีส่วนร่วมของชุมชนในการท่องเที่ยวเชิงนิเวศของอุทยานแห่งชาติดอยอินทนนท์ และ เพื่อศึกษาความสัมพันธ์ของชุมชนกับการท่องเที่ยวเชิงนิเวศ โดยใช้เครื่องมือการสัมภาษณ์เชิงลึกจากผู้นำชุมชน อุทยานแห่งชาติ หน่วยงานรัฐ ภาคเอกชน(NGO) บริษัทนำเที่ยว ผ่านการวิเคราะห์ข้อมูลเชิงคุณภาพใช้การวิเคราะห์เนื้อหา และการเก็บแบบสอบถามจากกลุ่มประชากรตัวอย่าง 302 คน ในเขตอุทยานแห่งชาติดอยอินทนนท์ โดยเก็บรวบรวมข้อมูลด้วยแบบสอบถาม วิเคราะห์ข้อมูลโดยหาค่าร้อยละ ค่าเฉลี่ย ส่วนเบี่ยงเบนมาตรฐาน ทดสอบสมมติฐาน โดยการวิเคราะห์แปรปรวน (ANOVA) ผลสรุปของการศึกษาพบว่า การมีส่วนร่วมของชุมชนในการท่องเที่ยวเชิงนิเวศโดยรวมอยู่ในระดับปานกลาง และเสนอให้เจ้าหน้าที่ฝึกอบรมและสร้างการจัดการที่เหมาะสมให้กับชุมชนท้องถิ่นเพื่อเพิ่มศักยภาพ การท่องเที่ยวเชิงนิเวศในอุทยานแห่งชาติดอยอินทนนท์

คำสำคัญ: การท่องเที่ยวเชิงนิเวศ การมีส่วนร่วมของชุมชน อุทยานแห่งชาติดอยอินทนนท์

Introduction

A concept of ecotourism based on community involvement has been mentioned long time ago. In 1970s, foreign scholars started mentioning about community involvement in ecotourism. Peter E. (1980) explained that ecotourism is a form of tourism using communities as touring resources and products. Such activity will affect the lives of residents in the communities. In the same time, Clande M. (1980, referenced Huo cui hong, 2009) conducted a research under a subject of Ecological and Cultural Planning for Local Community Involvement which is the first time that a concept of ecotourism community involvement was proposed. In 1985, Peter E. proposed a clear concept regarding community involvement (Peter E. and Ann E., 2004). In a book named "Tourism: A Community Approach", Peter E. proposed a component format of community tourism strategy that (1) accessible environment which is a foundation for ecotourism development that directly related to a degree of tourism resource utilization and environmental protection, (2) business is a basic objective on economic benefit of tourism activities and ecotourism is important to regional economic development, (3)

society and culture mean ecotourism development must rely on local facilities and cultures. Thus, local tradition and public emotion must be strictly taken into account in planning and management and (4) good management is a guarantee against achievement expected by communities and tourists (Cheng, 2004), which is a foundation of important concept and theories leading to development of community involvement of present concept of ecotourism.

In Thailand, community involvement in ecotourism originated when the government aware about the importance of community involvement and has been included in the Eight National Economic and Social Development Plan (1997-2001) up to now. Then, it has been applied to the national parks in order to develop tourism in national parks, at the same time to protect natural resources and cultural resources in national park areas of Thailand. Furthermore, the strategy to put the ecotourism in the national agenda is to enhance the collaboration and relationship among the related stakeholders including state agencies and local community. Moreover, the private sector and Non-Governmental Organizations (NGOs) are also encourage to participate and support the involvement of community involvement in ecotourism. The pioneered in development of community involvement in ecotourism in national parks is Doi Inthanon National Park. Whereas, does community involvement machine of ecotourism in national parks explicit in all aspects? so we can find which part is weakness of national park system machine and timely find out solution before the natural and cultural resource will be degenerated. Therefore, it is important to do the study in Doi Inthanon National Park, where overall image and development of ecotourism community involvement in Thai national park can be seen.

Hence, the objectives of this study were to examine the mechanism of community involvement of ecotourism in Doi Inthanon National Park, and to study relationship between community and community involvement in ecotourism. The study was carried out by reviewing the relationship between the residents of the Doi Inthanon National Park and community involvement in ecotourism, as well as the type, content, process, role, scale, and degree of community residents' involvement in Doi Inthanon National Park ecotourism.

Community-based ecotourism in Doi Inthanon National Park

Community-based ecotourism in Doi Inthanon National Park was established in 1999 due to few factors, such as the problem of drought affecting farmers both inside and surrounding the park, lack of communication and improper management between the staff of national park and communities. Lack of management in tourism resources of communities in Doi Inthanon National Park has led to the better cooperation between state agencies, the national park, NGOs and communities to establish ecotourism community involvement. It was started from Mae Klang Luang Village where there was a utilization of community forest area in ecotourism. A new ecotourism management was developed by providing more benefits to the communities and minimizing the impacts to the natural resources. Khun Klang Village was allowed by the park to use the national park recreation area by involving in management of local tourist guides in Kew Mae Pan Nature Trail. After that, in 2004, Pha Mon Village has established ecotourism by community involvement. The community conducted study and research on potential in development of community to be a community for ecotourism by itself under the support from Thailand Research Fund. Activities conducted comprised of trekking on nature trails, participation in community folk cultural activities such as weaving, bamboo basketwork, rice planting and harvesting in paddy field making season, tasting of local coffee, as well as providing accommodation service to tourists in order to experience the nature and environment closely.

Materials and method

Study area

Doi Inthanon National Park was established on the 11th November 1965. It is located in Chiangmai Province, northern part of Thailand with an elevation of 2,565 meters above sea level, has an area of 119,045.25 hectares (Department of National Park, Wildlife and Plant Conservation, 2012). The climatic condition in this area is dominated by rainy, winter and dry seasons. It is recorded as the highest mountain in Thailand. Doi Inthanon National Park is one of the most important national parks in Thailand because it has the most luxuriant forest and is one of the most tourist attraction sites. There are many tourist attractions across its mountain range such as four nature trails, eight waterfalls, a cave, two memorial pagodas for the 9th king and his queen, and three ecotourism communities.

The national park covers 3 districts, 7 sub-districts and 40 villages. There are 22,791 residents living within and nearby the national park boundary. There are three ethnic groups including local thai dwelling at foothill nearby mountain boundary area inside the national park (Doi Inthanon National park, 2016.). Most of the communities have resided in this forest

area before the establishment of the Doi Inthanon National Park, where majority of them work as a farmer. They mainly grow rice, corn, coffee as well as vegetables, fruits and flowers of temperate zone which suitable with the cool climate. Generally, they use traditional system in farming by planting in rainy season except Chrysanthemum and flower of temperate zone, which can grow throughout the year (Community Development Project, 2015).

Methodology

Data Collection

Both primary and secondary data are collected to meet the objectives of this study. Primary data was collected through key informant survey, focus group discussion and interviews (questionnaire survey) with the local communities in the study area by using the structured questionnaires. The primary data was collected from 1st August 2017 until 30th September 2017. For questionnaire survey, 3 villages out of 16 villages that involved in ecotourism of Doi Inthanon National Park were selected namely, Mae Klang Luang Village, Pha Mon Village and Khun Klang Village. Similarly, secondary data was collected from official reports, documents, old records and other publication of relevant authorities such as National Park Office and Department of National Park, Wildlife and Plant Conservation.

Target population and sample size

Sample population group was sampled from head of families or family members with age of 18 years and above because range of age has relationship with the economy of the study area. The gathered number of households answering questionnaires was used as framework in selection of sample population group of the study. The selected persons for in-depth interview (key informants survey) are key information or opinions of stakeholders in ecotourism in the research area, who are representatives from communities, Doi Inthanon national Park, local state agencies, NGOs and tourism companies because in practical way all true information may not be able to be collected from the target population group. Therefore, the in-depth interview will be more clear and profound answering in the context of people participation in the area. A calculation of population number of sample group of a total of 302 households by using Yamane' formula (1973) accounts as 74.75 percent of household population involving in ecotourism in Doi Inthanon National Park and 42.72 percent of household population in all 3 villages. From the questionnaire survey, 300 respondents were completed the questionnaire survey, with 99.34 percent cover rate. The key informant survey of the national park stakeholders was obtained by in-depth interview of 12 resources person including the head of Doi Inthanon National Park, related head of villages, NGOs and tourism companies.

Data analysis

The completed questionnaires were gathered and encoded before statistically analyzed using statistical package. After that, the descriptive statistic was done based on the social and economic-demographic characteristics responses includes gender, age, religion, level of education, occupation, family income, second job, extra income, and source of income.

The statistical analysis of sample group for testing the study hypotheses are divided into two methods namely Simple T-test and Analysis of Variance (ANOVA). The statistical analysis by Simple T-test method was used to compare between two groups which in this research, are tests of gender and residential status. The Analysis of Variance (ANOVA) was used in comparing the average value of more than two score groups which in this study, are tests of age, religion, education, occupation, income and place of residence. Dependent variables used in hypothesis testing of this study are issues related to community involvement comprising of planning, decision and management, operation, benefit distribution, conservation of ecological resources, evaluation and guarantee mechanism. While independent variables are the social and economic-demographic characteristics of respondents such as gender, educational attainment, income and place of residence. The qualitative data is originated from open ended questions which the respondent's answered using their own words. Then it was analyzed by interpreting and creating conclusion from tangible information or visible phenomenon, such as acting, assembly of community members or ecotourism operation of community. Upon the researcher has seen concrete objects or various events, then, the conclusion will be created. During the questionnaire survey and in-depth interview, Thai language was used to accommodate the local communities and have better understanding on the objectives of the study. The data then translated into English. All qualitative data was paraphrased while it still gave precedence to its original meaning as obtained from the interviewees during the in-depth interview.

Results and Discussions

Social and economic-demographic characteristics of respondents

The result shows that major respondents for this study were male about 51.7 percent, while 48.3 were female respondents. Most of the respondents interviewed, where they involved in national park ecotourism were in the range of 31 to 40 years old (35.5 percent). Majority of the respondents' religions are Christianity and Buddhism in a proportion of half and half and there still are some tribal primitive beliefs. Moreover, 45.7 percent of the respondents were completed primary school level and below and 41.3 percent of them were completed secondary school or high school level. Most of respondents interviewed are farmers (plant

paddy rice) accounted for 58.7 percent. The result also shows that 58 percent of family have income less than 75,000 Thai baht per year and 45.3 percent of community residents have second job related to ecotourism, where 46.3 percent of income from second job is below 50,000 Thai baht per year. The main source of income is from agricultural sector accounted for 65.5 percent. Table 1 shows the social and economic-demographic characteristics of the respondents.

Table 1 Social and economic-demographic characteristics of respondents

Individual characteristic	Percent	Individual characteristic	Percent
<i>Gender</i>		<i>Household income per annum (Thai baht)</i>	
Male	51.7	Below 50,000	26.0
Female	48.3	50,001-75,000	32.0
<i>Age</i>		75,001-100,000	12.0
20 and below	1.3	100,001-125,000	10.0
21-30	24.7	125,001-150,000	14.0
31-40	35.3	150,001 above	6.0
41-50	24.0	<i>Second jobs</i>	
51-60	9.7	None	13.7
60 and above	5.0	Local guide	19.0
<i>Religions</i>		Weaving	14.7
Buddhism	47.3	Coffee produce	2.3
Christianity	49.7	Tourist accommodation	2.3
Ancestors	3.0	Souvenir seller	6.7
<i>Residential status</i>		Transportation service	0.3
Family's Head	45.4	Gather forest products for sale	0.3
family's members	54.6	Flower, vegetable, fruit farm	19.7
<i>Education</i>		Laborer	20.3
Primary school and below	45.7	Other	0.7
High school	41.3	<i>Extra income per annum (Thai baht)</i>	
Diploma	6.3	None	13.7
Bachelor's degree	6.7	Below 50,000	46.3
<i>Occupation</i>		50,001-75,000	25.7
Farmer(rice)	58.7	75,001-100,000	4.3
Farmer(vegetables)	10.0	100,001-125,000	5.0
Farmer(flower, fruit)	3.0	125,001-150,000	2.7
Laborer	19.0	150,001 above	2.3

Business	2.3	<i>The main source of income</i>	
State enterprise officer	0.7	Agriculture products	65.5
Government officer	2.3	Employee	20.5
National park officer	1.7	Tourism industry	4.0
Hotel or company employee	0.7	Other	10.0
Other	1.7		

Community involvement in ecotourism characteristics

According to the analysis of the community involvement in ecotourism characteristics of community residents, they involve in the ecotourism characteristics by different roles as local guide group (46.7 percent), tourist accommodation (34.4 percent) and souvenir (18.0 percent). Most of the community residents are group members (91.7 percent) and involved voluntarily about 71.7 percent. 71.0 percent of the community residents involved in ecotourism to gain more income. The highest proportion community residents participated in the ecotourism activity groups for periods of 2-4 years and 5-7 years are 31.0 percent and 28.7 percent, respectively. Table 2 shows the communities' involvement in ecotourism characteristic in Doi Inthanon National Park.

Table 2 The situation of community involvement in ecotourism

Community involvement in ecotourism characteristics		Frequency	Percentage
Community residents involved in ecotourism activities	Local guide	103	46.7
	Tourist accommodation	140	34.4
	Souvenir	54	18.0
	Coffee	17	5.7
	Community volunteers	7	2.3
	National Park Volunteer	2	0.7
	Tourist Restaurant	1	0.3
	Transportation services	1	0.3
Duties of ecotourism activities group	Group Manager	4	1.3
	Group Committee	21	7.0
	Group members	275	91.7
Motivation of involvement in ecotourism	Voluntary	215	71.7
	Head of village's persuasion	46	15.3
	Relatives and Friends persuasion	34	11.3
	National Parks/NGOs persuasion	3	1.0

The propose of involve in ecotourism	Recommended by relatives or friends	2	0.7
	Realize the importance of ecotourism	54	18.0
	Can have a stable career	16	5.3
	Family has more income	213	71.0
	Forest protected opportunities	28	9.3
	Can reduce hunting and forest deterioration	8	2.7
Period of involvement in ecotourism	Less than 6 months	19	6.3
	6 months - 1 year	36	12.0
	2 years - 4 years	93	31.0
	5 years - 7 years	86	28.7
	8 years - 11 years	31	10.3
	12 years or more	35	11.7

Community involvement in ecotourism

The average value and standard deviation data of the overall aspects of Doi Inthanon National Park community involvement in ecotourism are moderate degree, with the average of Mean 3.40. Degrees of community involvement in ecotourism in each aspect is shown in Table 3.

Table 3 community involvement mechanism of ecotourism

Community involvement in ecotourism	Mean	Std.	Interpretation
1. Planning	3.27	1.08	Moderate
2. Decision and management	3.39	0.99	Moderate
3. Operation	3.15	0.89	Moderate
4. Benefit distribution	2.95	1.14	Moderate
5. Conserve ecological resources	4.05	0.80	High
6. Evaluation	3.21	0.93	Moderate
7. Guarantee mechanism	3.82	0.62	High
Overall	3.40	0.54	Moderate

Community involvement in ecotourism according to social and economic-demographic characteristics of respondents

Statistical relationship between community involvement and social and economic-demographic characteristics of sample group on the aspects of gender, education, household income per annum and place of residences were analyzed using t-test and one-way ANOVA. T-test analysis for independent samples is used to derive the gender of community residents with different community involvement in ecotourism. The result shows that independent samples t-test probability value is 0.001, the mean difference is significant at the 0.05 level. In terms of specific analysis, community residents in different genders involvement in ecotourism of planning, decision and management, evaluation are also difference in significant at the 0.05 level as shown in Table 2. However, the community residents in different gender involvement in ecotourism of operation, benefit distribution, conserve ecological resources, guarantee mechanism are not difference in significant at the 0.05 level. In the in-depth interview, the resource persons highlighted that "As the primitive tradition and culture of the tribes, men will act as family head carrying on occupations to support family and participating in community's activities which make them to have opportunity to participate in tourism in national park more than women who take responsibility in taking care activities in house such as cooking and take care of the children in the house". The finding of this study is different from Siranee (2005), the study on Factors Affecting on People Participation in Ecotourism Management of Klonglan National Park, Changwat Kamphaeng Phet, Thailand, which indicated that gender has no relationship with people involvement in ecotourism management at the statistical significance level of 0.05.

Besides, the education level has important roles on people involvement. The result, which was analyzed by the one-way-ANOVA, shows that the probability value of overall education level is 0.094 and the probability values of community involvement on the aspects of planning, operation, benefit distribution, conserve ecological resources and guarantee mechanism are 0.92, 0.026, 0.182, 0.184 and 0.357, respectively. This means that there is no statistical significant difference at the level 0.05. But the same analysis method shows that the probability values on the aspects of decision and management and evaluation are 0.015 and 0.002, respectively which are statistical significant difference at the level 0.05 and corresponding to the research result of Mak Kwun-ling (2011) in a study of Community participation in tourism: a case study from Tai O, Hong Kong. The result of sample group participating in decision-making on tourism development in Tai O has significant relationship with the study and parallels to the research result of Yeboah (2013) on Assessing community participation in selected ecotourism projects in the Brong-Ahafo Region, Ghana, which confirms that education level and community involvement on aspects of decision-making,

implementation and evaluation and monitoring are statistical significant difference at the level of 0.05.

In in-depth interview, it was confirmed by the resource persons that there is weakness in management and administration because the main village committee only consist of those who have knowledge about the community such as former village headman, former member of sub-district administration organization, religious leader, teachers, and physician. Since the villagers themselves have limited knowledge, therefore the community method will be used then the leader of each party will bring the villagers' problems to present to relevant agencies, after that the representative will bring the result to inform the villagers again."

Population household income in each year directly affects participation in ecotourism. According to the analysis by the one-way ANOVA, probability value of overall community involvement is 0.001 and the probability value of community involvement on the aspects of benefit distribution, conserve ecological resources, and evaluation is 0.00 which is a statistical significant difference at the level 0.05, but on the aspects of planning, decision and management, operation, and guarantee mechanism has no statistical significant difference at the level 0.05. This is corresponding to the research result of Yeboah (2013) who find out that education level and community involvement on the aspects of evaluation and monitoring have statistical significant difference at the level 0.05, while implementation has no relationship with education level of community.

In the in-depth interview, the resource persons mentioned that the education level enables the villagers to clearly see that what they get from the involvement which is monetary, importantly, if villagers speak well, they will get tip from tourists. If they are in good spirits and dress up properly, they can sell goods to tourists. If scenery is not good, tourists will not understand and tourist guides will not speak. These things make tourists not coming to visit again. Therefore, everything must be trained and good system must be managed. Members of tourist guides must help to look after forests. For example, if there is forest fire or cleared forest, tourists will not come to visit. Therefore, villagers being members of tourist guides must look after the forest, so that it still can be tourist attraction and there will be no third party to come and gain benefit for themselves. The resource persons also mentioned that in the past time, villagers must go to forest in order to hunt wild animals and collect wild plants for their socioeconomic source. After the establishment of the national park, the villagers were informed about the benefit of ecotourism, which is not just pointing to birds and animals, but they were informed that the birds, animals and other flora is valuable and priceless, even it still alive. Previously, they went to forest areas and hunted the animals and sell it for higher price to get income. After that, in 1999, the villagers stopped hunting and turned out to be narrators and those birds are still alive. When villagers do not hunt, animals are still at the

former place and whenever tourist groups come to visit, they can see such animals. This instance can be confirmed.

The analysis of variance is use to compare the means of villages and community involved in ecotourism aspects. The result shows that probability value of community involved in ecotourism on overall aspects is 0.14, and the mean difference is not significant at the 0.05 level. This result is different from the study of Yeboah (2013) on Assessing community participation in selected ecotourism projects in the Brong-Ahafo Region, Ghana, which indicated that involvement of Tanoboase Community, Boabeng Community and Fiema Community in projects of the Tourism Authority are statistical significant difference at the level of 0.05. In addition, the specific result shows that different villages, communities' involvement in ecotourism on four aspects namely planning, benefit distribution, conserve ecological resources, and guarantee mechanism are statistical significant difference at the level of 0.05, as shown in Table 2. Communities involvement in ecotourism on aspects of decision and management, operation, evaluation, and guarantee mechanism are not statistical significant difference at the level of 0.05. This might due to reasons in differences of nationalities and lifestyles and ideas, which affect community involvement in ecotourism. Specifically, Khun Klang is a Hmong tribe village with a character of having courage to express their will, Mea Klang Luang Village and Pha Mon Village are more casual and live in simple life of Karen tribe. Therefore, Khun Klang Village has a leading role in ecotourism planning, at the significant level of 0.05. For the benefits distribution, Khun Klang Village also has degree of involvement higher than the two villages, at the significant level of 0.05, because Khun Klang Village gets involved by having its local guide activity in Kew Mea Pan nature trail. The area above-mentioned is located at the outdoor recreation area and some protected areas of the national park, so, the national park managers and environment specialist are co-operators. This encourages Khun Klang Village to have more involvement in protection of national park ecology, at the significant level of 0.05.

In the in-depth interview, the resource persons mentioned that each community has its own prominent point such as Pha Mon still has a conservation of traditional lifestyle and has sustainable management which is managed by youth and distribute revenue to community such as fund for garbage management, local tourist guides arrange queue in working and villager themselves arrange and divide duties to work according to their own times which does not affect their main occupations. They also informed that each group has different potential depending on the strength of the committee. Change of new executive group may affect direction determination. However, from experience over 10 years, they are quite able to adjust themselves well. A strength point of them is a long experience in working and there are other agencies coming to support, there is study tours as sample case, so, they went to see, touch

and exchange with other groups. This makes them quite strong at this point. There is an opening to recruit members as a round. There are conditions of being member. If such conditions are fulfilled, it will be a full member not a member by name only because there are activity groups, so, members must give cooperation. Groups will emphasis on cooperation rather than number.

Table 4 The analysis of communities involved in ecotourism

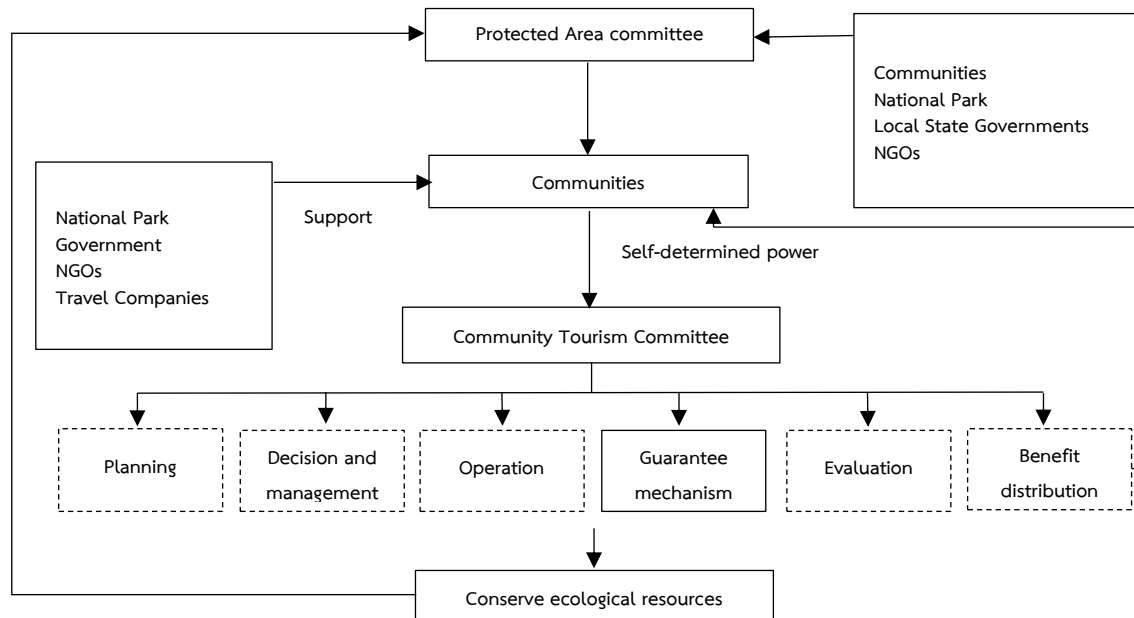
		Planning	Decision and management	Operation	Benefit distribution	Conserve ecological resources	Evaluation	Guarantee mechanism	Total
	N	Mean	Mean	Mean	Mean	Mean	Mean	Mean	Mean
<i>Gender</i>									
Male	155	3.4	3.52	3.24	3.06	4.1	3.33	3.89	3.51
Female	145	3.13	3.24	3.06	2.83	4	3.07	3.76	3.3
T-test		0.031*	0.015*	0.079	0.08	0.228	0.012*	0.1	0.001*
<i>Education</i>									
Primary school and below	137	3.24	3.36	3.13	3.06	4.1	3.14	3.77	3.4
High school	124	3.19	3.36	3.15	2.85	3.96	3.2	3.84	3.36
Diploma	19	3.35	3.11	2.96	3.13	4.34	3.03	3.97	3.41
Bachelor's degree	20	3.84	4.04	3.53	2.58	3.94	3.95	3.96	3.69
ANOVA		0.92	0.015*	0.206	0.182	0.184	0.002*	0.357	0.094
<i>Household income per annum (Thai baht)</i>									
None	78	3.31	3.31	3.08	2.39	3.65	3.06	3.92	3.24
Below 50,000	96	3.2	3.3	3.09	3	3.98	2.96	3.83	3.34
50,001-75,000	36	3.39	3.46	3.25	3.13	4.3	3.33	3.75	3.51
75,001-100,000	30	3.17	3.3	3.25	3.33	4.33	3.45	3.55	3.48
100,001- 125,000	42	3.35	3.68	3.26	3.23	4.35	3.66	3.84	3.62
125,001- 150,000	18	3.16	3.47	3.22	3.42	4.48	3.47	3.92	3.59
ANOVA		0.896	0.378	0.776	0.00*	0.00*	0.00*	0.12	0.001*
<i>Village</i>									
Mea Klang Luang	100	3.44	3.4	3.15	2.72	3.85	3.08	3.62	3.32

Pha Mon	100	3.44	3.48	3.26	2.71	3.78	3.19	3.86	3.41
Khun Klang	100	2.89	3.29	3.05	3.34	4.52	3.37	3.99	3.48
ANOVA		0.000*	0.393	0.276	0.000*	0.00*	0.085	0.00*	0.137

Recommendations

This study illustrates community involvement machine of ecotourism in Doi Inthanon National park have shown in Figure 1.

Figure 1 Communities Involvement Machine of Ecotourism



Hu Zhiyi and Zhang Zhaogan (2002) has divided community participation into 4 levels includes individual participation, group participation, people participation, and full participation. Community involvement in Doi Inthanon National park ecotourism follow the communities realized sustainable tourism and get benefit from tourism activities that they were responsible for preserving the environment and culture. Thus, the community involvement in Doi Inthanon National park ecotourism is full participation level. Nevertheless, some part of planning, decision and management, operation, evaluation, benefit distribution, community involvement in ecotourism mean indicators interpret in moderate level, therefore there were some ambiguous in involvement machine. Consequently, it can be suggested from

the result that feature and weakness of community involvement in the Doi Inthanon national park ecotourism as follows:

The feature of community involvement in the Doi Inthanon National Park Ecotourism

The feature of the Doi Inthanon National Park community involvement in ecotourism includes: cultivation management capabilities of village residents and leaders of community residents, the stakeholders of the overall ecotourism are required to perform under the contract, national parks and communities adopt scientific and traditional methods to protect the natural resources of the national park, apply the National Parks Committee to coordinate relationship between national parks and communities, pay attention on benefits of community residents and prohibit entrepreneurs outside communities.

Weaknesses of Community involvement in the Doi Inthanon National Park ecotourism

Doi Inthanon National Park community involvement in ecotourism is a teamwork system. The mechanism of community involvement in ecotourism can be the perfect system for the sustainable development of ecotourism in national parks (Wang, 2003). The development of Doi Inthanon National Park ecotourism mechanism has been recognized and the implementation system is relatively completed, but there are still some deficiencies. For example, the impact system, national parks and community in order to protect natural resources, environment and local culture. However, there are remaining problems on waste impact and tourism carrying capacity.

In the support system, government policies are more anxious, the government often changes policies and some projects may not continue or be disconnected. The control system is outdated. Regulations of activity groups are not obeyed. Some group members ignore regulations which may be a point leading to other subsequent problems. However, for the implementation of ecotourism in forest areas of communities, the communities still need guidance from state agencies and the state should give clear cooperation in revision of rules and regulation by clearly appointing supervisor and regularly examining the implementation of activity groups, not only focus to make marketing. This should include to forward activities to next generations which is concerned by all groups of stakeholders because the joint of two generation are sensitive and complicated or in another meaning is the sustainability of communities (Napaporn,2010). The concept of sustainable tourism is encouraged to community leaders to be aware of its importance, but it cannot transfer to the community members yet. It is still required to stimulate and support in conscious to have a concept of sustainability. Another dimension, that is important in present world, is advanced technology. In present age, technology can be two-edged sword; the communities being ordinary farmers

will not be able to follow the fast technology. Communications that may be unclear in social media may lead to miscommunication and communities themselves also be ignorant. Therefore, communities should wisely have connection with technology for the maximum benefit of the communities and natural resources.

Conclusion

In conclusion, the communities' involvement in ecotourism activities in Doi Inthanon National Park is important to ensure the sustainability of the communities' livelihood as well as to protect the natural resources of Doi Inthanon National Park. This study find out that at present, the involvement of the communities in ecotourism activities in Doi Inthanon National Park is moderate and there are a lot of improvement to do to increase their involvement. This study recommend that the authorities especially the government and the National Park Office should provide need-based training and establish a proper management to encourage local peoples to optimize the benefit from ecotourism activities in Doi Inthanon National Park.

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