การสนับสนุนการคงอยู่ของป่าที่ส่งผลต่อพฤติกรรมการอนุรักษ์

Support of Remained Community Forest Affecting Conservation Behavior

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การวิจัยนี้เป็นการวิจัยเชิงปริมาณซึ่งเป็นการวิจัยเชิงสำรวจ เก็บรวบรวมข้อมูลโดยใช้แบบสอบถาม กลุ่มตัวอย่างคือชาวท้องถิ่นที่อาศัยอยู่โดยรอบป่าชุมชนโคกหนองไผ่ จำนวน 390 คน โดยมีวัตถุประสงค์ เพื่อศึกษาระดับการสนับสนุนการคงอยู่ของป่าชุมชนซึ่งประกอบด้วย การสนับสนุนของรัฐบาล การสนับสนุนขององค์การบริหารส่วนท้องถิ่น การสนับสนุนของภาคประชาชน และการสนับสนุนของประเพณีวัฒนธรรม และ ระดับพฤติกรรมการอนุรักษ์ของชาวท้องถิ่น และศึกษาอิทธิพลของตัวแปรอิสระ การสนับสนุนการคงอยู่ของป่าชุมชน ที่ส่งผลต่อตัวแปรตามพฤติกรรมการอนุรักษ์ของชาวท้องถิ่น โดยใช้สถิติการถดถอยพหุคูณเชิงเส้นตรงเพื่อทดสอบสมมติฐานของการวิจัย ผลการวิจัย พบว่า ระดับการสนับสนุนการคงอยู่ของป่าชุมชน และพฤติกรรมการอนุรักษ์ของชาวท้องถิ่น อยู่ในระดับมากทั้งหมด อีกทั้งยังพบว่า การสนับสนุนการคงอยู่ของป่าชุมชนซึ่งประกอบด้วย การสนับสนุนของรัฐบาล การสนับสนุนขององค์การบริหารส่วนท้องถิ่น การสนับสนุนของภาคประชาชน และการสนับสนุนของประเพณีวัฒนธรรม ส่งผลต่อพฤติกรรมการอนุรักษ์ของชาวท้องถิ่น โดยมีอำนาจในการพยากรณ์ ร้อยละ 95.40 (Adjusted R^2 = 0.954) อย่างมีนัยสำคัญทางสถิติที่ระดับ 0.01 รวมทั้งยังพบว่าการสนับสนุนของภาคประชาชนมีอิทธิพลต่อพฤติกรรมการอนุรักษ์ของชาวท้องถิ่นถึงร้อยละ 61.90 อย่างมีนัยสำคัญทางสถิติที่ระดับ 0.01 ดังนั้น การสนับสนุนของภาคประชาชนจึงเป็นปัจจัยสำคัญต่อการสนับสนุนการคงอยู่ของป่าชุมชน

คำสำคัญ: การสนับสนุน, การคงอยู่ของป่าชุมชน, พฤติกรรมการอนุรักษ์, ชาวชุมชน

Abstract

The survey research was conducted. Questionnaire was used as research tool for collecting data from 390 local peoples who live around Khok-Nhong-Pai community forest in Northeastern region of Thailand. The objectives were to study the support of remained community forest and local people conservation behavior levels, and to study the independent variables of Support of Remained Community Forest composing of Governmental Support, Local Administration Organization Support, Popular Support, and Cultural and Traditional Support affecting to dependent variable of Local People Conservation Behavior. Multiple Regression Analysis was used for predicting the relationship between independent variables and dependent variable. The findings illustrated that in holistic view of support of remained community forest and local people conservation behavior levels were at more levels. Moreover, Support of Remained Community Forest composing of Governmental Support, Local Administration Organization Support, Popular Support, and Cultural and Traditional Support affected to Local People Conservation Behavior

(Adjusted R^2 = 0.954). However, Popular Support was the most effect to Local People Conservation Behavior with 61.90 percents with statistically significant at level of 0.01. Therefore, the popular support would be significant factor to support of remained community forest.

Keywords: support, remained community forest, affecting, local people conservation behavior

Introduction

Community forestry, firstly, came to eminence in the mid-1970s and had persistent to evolve over the last few decades in a growing number of countries. Community forest has no unique definition, generally, it involves the local people in forest planning as well as management and a forest type is regularly relatively small scale. The accessibility of forest resources is often significantly reduced for use by the local people due to escalating stresses to cultivate the agricultural product for local selling and exporting due to economic and political changes. Over the past two decades, community forestry has been applied successfully in many developing countries with its main goal being the alleviation of poverty amongst local forest communities and forest conservation. More recently, community forestry has been implemented in developing countries and it has been successful in its aims of sustainable forest management in order to secure socio-economic benefits for local communities (Arnold, 2001; Roberts & Gautam, 2007; Harrison & Suh, 2004).

Community forestry is an evolving branch of forestry whereby the local community plays a vital role in forest management and land use decision making by themselves in the facilitating support of government as well as change agents. It involves the participation and collaboration of various local peoples including community, government and non-government organizations (NGO's). The level of involvement of each of these groups is dependent on the specific community forest project, the management system in use and the region. The community forestry can now be seen in many countries including Nepal, Korea, Brazil, India, North America, Bhutan, Bolivia, Mexico, Vietnam, Indonesia and Thailand (Acharya, 2002; FAO, 1978; Barton et al., 2005; Thiengkamol, 2009c; Wikipedia, 2013; Buffum, 2007; Evans et al., 2010; RECOFTC, 2013a).

Local peoples of community forestry have a vested interest to establish sustainable practices, whether this is to develop and maintain a regular income, ensure that forests are sufficiently protected to ensure their longevity or to reduce illegal activities and manage the area in such a way to promote conservation. In this situation, local peoples came to finale to handover forest resources to local communities for conserving, managing and utilizing by their own decision. Despite major development, continued improvement in the collaboration between local government and forest community seems to be a key point for better community forest management. A wide range of futures scenarios have been put up to help the environmental decision process (Evans et al., 2008).

Forest devolution is referred to provide communities with greater decision-making power over the use and future of tropical forests. However,

decentralization policies have not always had the anticipated effect; in some cases they have caused or furthered the termination of the poor, the creation of open access conditions, resource conflict and forest degradation. These problems are likely to arise when forest communities are at a disadvantage when interacting with other local players and are unprepared for their new opportunities and responsibilities due to their physical remoteness, cultural isolation, low literacy rates or lack of experience in formal planning and negotiation (Buffum, 2007; Evans et al., 2010; RECOFTC, 2013b).

Community forest is an essentially natural resource as four basic needs for human being in terms of food, cloths, drug, and shelter, additionally, it also essential to other creatures. Besides, it provides direct benefits as mentioned above, it also gives indirect benefits such as giving shadow, soil erosion prevention, regulate weather with proper rainy season and adjusts the temperature to be balance. Forest conservation and management must be regarded to community local peoples planning decision making, implementing, monitoring and preventing degradation and over consumption (Buffum, 2007; Ruengpanich, 2003; Evans et al., 2008; Thiengkamol, 2009c; RECOFTC, 2013b).

Local people's community forest must be able to participate efficiently in planning, decision making, implementing for community forest conservation, therefore, its sustainability would be accomplished. Moreover, they must be able to express their perspectives, and they must be able to collaborate and negotiate effectively with other actors. Over the last decade, community forest devolution advocates have developed methods for facilitating collaborative forest management and democratic participation by forest communities (Davis-Case 1990; Holman & Devane, 1999; Colfer 2005; Evans et al., 2006; Lynam et al.m 2007; CIFOR 2007). Promotion of collaborative forest management has led to legal and policy changes to accommodate multi-stakeholder forest management (Buck et al., 2001; Fisher 1995).

Thailand has more than 10,000 community forest sites. Presently, there is no Community Forestry Bill in place. There is also no recognition for community forests that overlap with protected areas. This affects between 1 million and 2 million local peoples who depend on forest resources from these forest areas. However, community forestry proponents include the Royal Forest Department, NGOs, and Thailand's emerging community forestry networks that continue to make progress. The Royal Forest Department had formally recognized and registered around 7,000 community forests in 2010 for those are all outside of protected areas. However, this department is dynamically looking for to register more. The development of community forestry networks is currently initiative with a variety of members, from the sub-district and district levels through to the Community Forestry Assembly. It is operated nationally. These networks are proving to be a necessary medium in which to contribute to lessons learned and practical experience for setting up and managing sites. They also give supporters a stronger voice to advocate for legislative reforms (RECOFTC, 2013b).

The rising matter of climate change alleviation is also pursuing the interest of the community forestry

movement in Thailand. The climate change problem has caused possible ways of developing participatory forest management that carries greater advantages to local people to gain more realization the importance of forest conservation. Particularly, Thailand locates in the tropical zone; therefore most of plants in the community forest are useful as food, drug, clothing and shelter for local people (Edmunds & Wollenberg, 2003; RECOFTC, 2013b; Thiengkamol, 2009c). However, it needs to understand support of remained community forest in terms of governmental support, local administration organization support, popular support, and cultural and traditional support affecting to dependent variable of local peoples conservation behavior in order to rearrange the pattern of community participation for forest management effectively (Thiengkamol, 2005a; Thiengkamol, 2009c; Jukravalchaisri et al., 2013; Artwanichakul et al., 2012a; Mongkonsin et al., 2013b). Therefore, in this study aims to measure the forest conservation behavior in terms of food sources, decreasing of deforestation, and afforestation (Colfer 2005; Evans et al., 2006; Lynam et al.m 2007; CIFOR 2007).

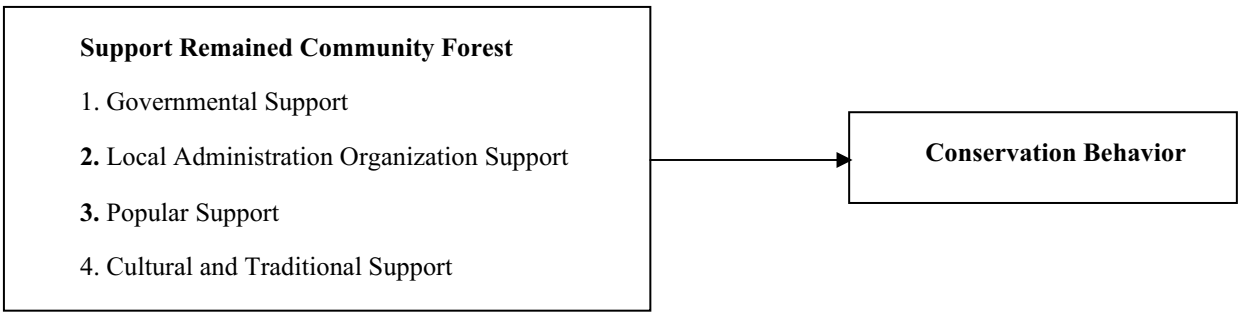
Objective

The research objectives were as the followings.

1. To study the support of remained community forest level and local people conservation behavior level.

2. To study independent variables of support of remained community forest composing of governmental support, local administration organization support, popular support, and cultural and traditional support affecting to dependent variable of local people conservation behavior.

Conceptual Framework



Methodology

The research design was implemented in steps by step as the followings.

Population and Sample

The populations were 1,818 local peoples living in 4 villages of Nhong Gnong, Pailom, Nhong Bok, and Non-jan in Khampom Sub-district, Wapee Prartoom District, Maha Sarakham Province in the year of 2013. The simple random sampling technique was employed to collect the sample for 390 peoples from 4

villages of Khampom Sub-district, Wapee Prartoom District, Maha Sarakham Province.

Research Tool

The research instrument was the questionnaire and it was used for data collection. The questionnaire consisted of 10 items of demographic characteristics and 31 questions with 5 rating scales of support of remained community forest and local people conservation behavior. The content and structural validity were determined with Item Objective Congruent (IOC) by 5 experts in the aspects of psychology, social science and social research methodology (Rovinelli & Hambleton, 1977). The reliability was done by collecting the sample group from 50 village local peoples of Khampom Sub-district, Wapee Prartoom District, Maha Sarakham Province which was the similar characteristic of people and location and they were not sample group. The reliability was determined with Cronbach's Alpha (Cronbach, 1951). The reliability of support of remained community forest, local people conservation behavior, and total questionnaire were 0.925, 0.938, and 0.949 respectively.

Data Collection

The questionnaire was used for data collecting from 4 villages of Nhong Gnong, Pailom, Nhong Bok, and Non-jan in Khampom Sub-district, Wapee Prartoom District, Maha Sarakham Province during January to March in 2013.

Statistical Analysis

The descriptive statistics were used that include frequency, percentage, mean and standard deviation. The rating for explanation of level of behavior were as the followings:

The rating for explanation of level of behavior

Rating	Level of behavior
0-1.50	very low
1.51-2.50	low
2.51-3.50	moderate
3.51-4.50	more
4.51-5.00	most

The inferential statistics used was Multiple Regression Analysis (Hair et al., 1998) by considering confident interval at 0.05 and 0.01.

Results

1. General Characteristics of Sample Group

Table 1 shows the general characteristics of 390 local people who live at 4 villages of Nhong Gnong, Pailom, Nhong Bok, and Non-jan in Khampom Sub-district, Wapee Prartoom District, Maha Sarakham Province in the year of 2013. They were selected by simple random sampling technique. Most of them were female (56.15%), paid respect to Buddhism (100.00%), married (73.33%), graduated at lower secondary level (37.95%), were agriculturist (45.64%), had family income per month with average of 5,694.87 bahts, had number of family member with 4-6 persons (55.64%), had duration of living in community with 10 years and above (100.00%), and had social position in community as general people (85.38%) as shown in table 1.

Table 1

Demographic Characteristics of Sample Group

Characteristics	Local People	
	Frequency	**Percent**
Gender		
Male	171	43.85
Female	219	56.15
Religion		
Buddhist	390	100.00
Christian	-	-
Marital Status		
Single	87	22.31
Married	286	73.33
Widow	12	3.08
Divorce	5	1.28
Separated	87	22.31
Total	**390**	**100**
Education Level		
Primary level	120	30.77
Lower Secondary Level	148	37.95
Upper Secondary Level	49	12.56
Vocational level	17	4.36
High Vocational/Diploma Level	17	4.36
Bachelor	38	9.74
Higher than Bachelor	-	-
Unidentified	1.00	0.26
Total	390	100
Occupation		
Agriculturist	178	45.64
Business Owner	45	11.54
Employee/General Hire	80	20.51
Governmental Officials	43	11.03
Private Enterprise Officer	44	11.28

Characteristics	Local People	
	Frequency	Percent
Family Income Per Month		
Highest income =35,000 baths, Lowest income=1,500 baths		
Mean 5,694.87 baths, S.D.=3991.05		
Number of Family Member		
1-3 persons	126	32.31
4-6 persons	217	55.64
More than 6 persons	47	12.05
Duration of Living in Community		
1-3 years	-	-
4-6 years	-	-
7-9 years	-	-
10 and above 10 years	390	100.00
Social Position in Community		
Health Volunteer	17	4.36
Head of Village	-	-
Assistant of Village Head	24	6.15
Member of TOA and Municipality	16	4.10
General People	333	85.38
Total	**390**	**100.00**

2. Results of Support of Remained Community Forest Level

The results of support of remained community forest level of 390 local peoples had total mean score at more level with 4.23 while considering on each aspect, it was revealed that local administrative organization support was at more level with 4.43 and subsequence were popular support, cultural and traditional support, and governmental support with 4.41, 4.21, and 3.96 respectively as presented in table 2.

Table 2

Support of Remained Community Forest Level

	Governmental Support	$\overline{X}$	S.D.	Level
1.	Agricultural officer provides knowledge to local people for community forest conservation and utilization.	4.62	0.60	Most
2.	Forest Department Land Development Center make public relation bout National Protected Forest Act.	3.44	1.12	More
3.	Land Development Center makes public relation on knowledge of rehabilitation and quality improvement in the degradation part of community forest.	3.82	1.03	More
Mean of Governmental Support		3.96	0.92	More
	Local Administrative Organization Support	$\overline{X}$	**S.D.**	**Level**
4.	Local Administrative Organization provides knowledge about Community Forest Protection and Conservation Act.	4.15	0.94	More
.5	Local Administrative Organization supports tool and utensil for forest fire prevention such as fire wooden stick and fire extinguisher.	4.46	0.63	More
6	Budget support to different groups/clubs/organizers for community forest.	4.63	0.60	Most
7	Work force support to do fire fence protection for community forest.	4.49	0.65	More
Mean of Local Administrative Organization Support		4.43	0.71	More
	Popular Support	$\overline{X}$	**S.D.**	**Level**
8.	Local peoples devote force labor for participation of community forest conversation.	4.13	0.86	More
9.	Local peoples devote money for participation of community forest conversation.	4.62	0.60	Most
10.	Local peoples devote material, tool and utensils for participation of community forest conversation.	4.48	0.66	More

Mean of Popular Support		4.41	0.71	More
	Cultural and Traditional Support	$\overline{X}$	**S.D.**	**Level**
11.	Tradition of forest ordination assists forest conservation.	4.03	0.93	More
12.	Tradition of forest ordination makes community people to cut timber and degrade forest decreasingly.	4.48	0.66	More
13.	Tradition of forest ordination cultivates the local people to love community forest.	4.03	0.93	More
14.	The belief and tradition was introduced for community forest conservation would assist the effect to community forest.	4.48	0.66	More
15.	Having the temple in community forest would affect community forest conservation.	4.03	0.93	More
	Cultural and Traditional Support	$\overline{X}$	**S.D.**	**Level**
16.	Paying respect for grandmother and grandfather high ground would assist to participate for community forest conservation.	4.14	1.01	More
17.	If there was tradition of community forest conservation every year, it would affect to success of community forest conservation.	4.23	1.05	More
18.	High cemetery ground in the community forest takes a part to make people to pay respect for community forest and decreases encroaching.	4.23	0.90	More
Mean of Cultural and Traditional Support		**4.21**	**0.88**	**More**
Mean of Remained Community Forest Level		**4.23**	**0.83**	**More**

3. Results of Local People Conservation Behavior Level

The findings revealed that local people conservation behavior level of 390 local peoples in holistic view was at more level with 4.35. When considering on each item, it was found that local peoples persuaded other local community to look after community forest for global warming alleviation, local peoples participated for decreasing of timber cutting and deforesting, and local peoples participated in every environmental activity without benefit demand were at most levels with 4.63, 4.63 and 4.62 respectively as presented table 3.

Table 3

Community Forest Conservation Behavior Level

	Community Forest Conservation Behavior Level	$\overline{X}$	S.D.	Level
1.	Local peoples consumed food that existed in community forest.	4.03	0.93	More
2.	Local peoples consumed mushroom and herbs food that existed in community forest.	4.14	1.01	More
3.	Local peoples consumed foods that was prepare with environmental conservation technique.	4.23	1.05	More
4.	Local peoples avoided consuming extravagant foods from community forest	4.48	0.66	More
5.	Local peoples wore their friend about impact from deforestation.	4.13	0.92	More
6.	Local peoples persuaded other local community to look after community forest for global warming alleviation.	4.63	0.60	Most
7.	Local peoples felt willing to participate activities for community forest conservation.	4.49	0.66	More
8.	Local peoples participated for decreasing of timber cutting and deforesting.	4.63	0.60	Most
9.	Local peoples and family members lived daily adequately according to the royal remark of the king.	4.49	0.65	More
10.	Knowledge distribution of forest conservation was a participating way.	4.13	0.86	More
11.	Local peoples participated in every environmental activity without benefit demand.	4.62	0.60	Most
12.	Local peoples agreed that everyone should participate in environmental problem solving.	4.48	0.66	More
13.	Local peoples accepted that pubic mind was an important factor for participation in environmental problem solving.	4.03	0.93	More
Mean of Local People Conservation Behavior Level		**4.35**	**0.78**	**More**

4. The Relationship between Support of Remained Community Forest and Local People Conservation Behavior

The relationship between independent variables of support of remained community forest in terms of governmental support, local administration organization support, popular support, and cultural and traditional support affecting to dependent variable of local people conservation behavior as presented in table 4 and 5.

Table 4

Result Analysis Prediction Power of Support of Remained Community Forest Affecting to Local Peoples Conservation Behavior

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.978[a]	0.956	0.954	0.009822

a. Predictors: Constant, Support of Remained Community Forest

b. Dependent Variable: Local People Conservation Behavior

Table 5

Multiple Linear Regression Analysis between Support of Remained Community Forest Affecting to Local People Conservation Behavior

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	28.630	4	7.157	741.848	0.000[a]
	Residual	1.331	138	0.010		
	Total	29.961	142			

a. Predictors: Constant, Support of Remained Community Forest

b. Dependent Variable: Local People Conservation Behavior

From table 4 and 5 when Multiple Linear Regression was analyzed between independent variable of support of remained community forest affecting to dependent variable of local people conservation behavior, it was found that regression coefficient equaled to 0.978 (97.80%) and coefficient of R Square was 0.956 (95.60 %) with statistically significant at level of 0.01. After it was adjusted, the coefficient of R Square with power of prediction was 0.954 (95.40%).

5. The Relationship among Governmental Support, Local Administrative Organization Support, Popular Support, and Cultural and Traditional Support on Local People Conservation Behavior

Relationship between Support of Remained Community Forest and Local People Conservation Behavior, the result illustrated in table 6.

Table 6

Relationship between Support of Remained Community Forest and Local People Conservation Behavior

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
	Constant	0.211	0.093	-	2.261	0.025*
	Governmental Support	-0.107	0.025	-0.116	-4.195	0.000**
	LAO Support	0.304	0.027	0.279	11.269	0.000**
1.	Popular Support	0.521	0.029	0.619	18.173	0.000**
	Cultural and Traditional Support	0.232	0.023	0.283	10.041	0.000**

a. Predictors: Constant, Support of Remained Community Forest

b. Dependent Variable: Local People Conservation Behavior

From table 6, linear regression equation, it was revealed that independent variable of Support of Remained Community Forest consisting of Governmental Support, Local Administrative Organization (LAO) Support, Popular Support, and Cultural and Traditional Support affecting to dependent variable of Local People Conservation Behavior, with statistically significant at level of 0.01, 0.01, 0.01, and 0.01. Therefore, the equation 1 can be written as the following

$$y = a+b1x1+b2x2+ b3x3+b4x4 \quad \ldots\ldots (1)$$

When

y = Local People Conservation Behavior as Dependent Variable

a = constant value

b1 = Coefficient relation of Governmental Support as Independent Variable

x1 = Governmental Support as Independent Variable

b2 = Coefficient relation of LAO Support

x2 = LAO Support as Independent Variable

b3 = Coefficient relation of Popular Support

x3= Popular Support as Independent Variable

b4 = Coefficient relation of Cultural and Traditional Support

x4 = Cultural and Traditional Support as Independent Variable

Therefore, the prediction equation of relationship between independent variables of Governmental Support,

Local Administrative Organization (LAO) Support, Popular Support, and Cultural and Traditional Support affecting to dependent variable of Local People Conservation Behavior. It can be explained that Popular Support was the most effect to Local People Conservation Behavior with 61.90 percents with statistically significant at level of 0.01. Subsequences were Cultural and Traditional Support, Local Administrative Organization (LAO) Support, and Governmental Support with 28.30, 27.90, and -11.60 percents with statistically significant at level of 0.01, 0.01 and 0.01 respectively as the following equation 2.

$$y = 0.00-0.116x1+0.279x2+ 0.619x3+0.283x4 \quad (2)$$

Discussions

The results indicated that Governmental Support, Local Administrative Organization (LAO) Support, Popular Support, and Cultural and Traditional Support and Local People Conservation Behavior were at more levels. Moreover, the prediction equation of relationship of Support of Remained Community Forest composing of Governmental Support, Local Administrative Organization (LAO) Support, Popular Support, and Cultural and Traditional Support affecting to dependent variable of Local People Conservation Behavior and the Popular Support was the most effective prediction but the Governmental Support was negative direction. This implies that local peoples realize to their responsibility to conserve forest community with their participation but the governmental support did not support for local people community forest conservation behavior. The results were congruent to the study of Jukravalchaisri et al., 2013; study of Artwanichakul et al., 2012a; research of Thiengkamol, 2005a; study of Mongkonsin et al., 2013b. Moreover, the finding in this study indicated that Popular Support and Cultural and Traditional Support are the most affected on Local People Conservation Behavior that is congruent with the study of Alcorn, 2010.

Recommendations

From this study, it should study with the In-depth Interview to find out the more details that why the governmental sectors do not support for community forest conservation.

Conclusion

It might be concluded that community forest conservation would be successful when popular support because the local peoples require direct and indirect benefit from community forest. Additionally, if they gain more competencies for community forest management whether in terms of planning, decision making, implementing, monitoring and evaluating the community forest management, therefore it might be the best way of community forest conservation. Moreover, the problem of community forest degradation in different regions across

Thailand has been rapidly at present; therefore to understand the support of remained community forest covering variables of governmental support, local administration organization support, popular support, and cultural and traditional support are essential. The research was conducted to survey the opinion of local people who live nearby the community forest would assist to maintain the sustainable community forest. This study discovered that popular support was the most effect to local people's community forest conservation behavior with 61.90 percents.

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