

**Mekong Institute**

Research Working Paper Series 2012

# **Socioeconomic Impacts of Community Based Natural Resource Management in Siem Reap Province, Cambodia**

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December, 2012

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This publication of Working Paper Series is part of the Mekong Institute – New Zealand Ambassador Scholarship (MINZAS) program. The project and the papers published under this series are part of a capacity-building program to enhance the research skills of young researchers in the GMS countries.

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## Table of Contents

<b>List of Abbreviations</b>	<b>v</b>
<b>Acknowledgements</b>	<b>vi</b>
<b>Abstract</b>	<b>vii</b>
<b>1. Introduction</b>	<b>1</b>
1.1 Overview	1
1.2 Research Rationale	1
1.3 Objectives of the Research	2
1.4 Research Questions	2
1.5 Scope and Delimitations	2
<b>2. Review of Literature</b>	<b>3</b>
2.1 Protected Area (PA) Law	3
2.2 Draft Guideline on the Procedures and Process in establishing CPA	5
2.3 Forestry Law (2002)	6
2.4 Concept of Natural Resources	6
2.5 Concept of CBNRM	6
2.6 Effectiveness of CPA and CF Community	7
2.7 Concept of Socioeconomic impact	7
2.8 Paradigm of Impact Assessment of CBNRM process	7
<b>3. Research Methodology</b>	<b>8</b>
3.1 Data Collection	8
3.2 Method and Technique of Data Analysis	8
3.3 Selection of the Study Area	10
3.4 Sampling Procedure	10
<b>4. Results and Discussion</b>	<b>12</b>
4.1 Findings for CPA Popel	12
4.2 Findings for CF Thbaeng Lech	18

<b>5. Conclusions and Recommendations</b>	<b>23</b>
5.1 Recommendations	26
<b>References</b>	<b>30</b>
<b>About MINZAS</b>	<b>33</b>
<b>The Mekong Institute</b>	<b>34</b>

## **List of Abbreviations**

AVSF	=	Agronomes and Vétérinaires Sans Frontières
ADB	=	Asian Development Bank
CBNRM	=	Community Based Natural Resource Management
CF	=	Community Forestry
CFi	=	Community Fisheries
CPA	=	Community Protected Area
DANIDA	=	Danish International Development Agency
FA	=	Forestry Administration
FAO	=	Food And Agriculture Organization
ha	=	Hectare
MAFF	=	Ministry of Agriculture, Forestry and Fisheries
MINZAS	=	Mekong Institute – New Zealand Ambassador Scholarship
MOE	=	Ministry of Environment
NCDD	=	National Committee for Subnational Democratic Development
NGO	=	Non Governmental Organization
NRM	=	Natural Resource Management
NTFP	=	Non-Timber Forest Products
PA	=	Protected Area

## **Acknowledgements**

I sincerely thank my advisor, Dr. Heng Chan Thoeun, Deputy Director of Department of Climate Change, Ministry of Environment, Cambodia and my co-advisor Mr. Aryuwath Pratumsa, Program Specialist, Mekong Institute (MI), Khon Kaen, Thailand for guidance in my pursuance of this research topic. Without their academic this research would not have been made possible.

My special thanks to Dr. Suchat Katima, MI director and the staff, Dr. Vute Wangwacharakul, Researcher at Kasetsart University, Mr. Seang Sopheak, MI Program Facilitator, and other resource persons from MI for their excellent skills and efforts in the entire program.

My sincere gratitude goes to my advising committee members, namely Mrs. Hou Kalyan, Program Officer at the RECOFTC, Mr. Kim Soben, Lecturer at Graduate School, Royal University of Agriculture, Ms. Katia Halabi, Advisor at the GIZ, Siem Reap, and Mr. Keith Ward, Senior Environmental Economist for their invaluable efforts in making this thesis a useful scientific research document.

I would like to thank my employer, the Asian Development Bank for enabling me to accomplish my course works; and to the New Zealand Ambassador in Thailand, for his generous support given to the first scholarship program.

I am also very grateful to Mr. Khoeum Sokunviseth, Deputy Director of Siem Reap Provincial Department of Environment and Mr. Prak Marina, Deputy Chief of Siem Reap Cantonment, for their assistance during the research field work. I would like to thank the commune chiefs and commune councilors of Khang Phnom and Thbaeng, and the village chiefs of Popel and Thaeng Lech for their participation.

Finally, I am deeply grateful to my wife for her patience and hard work from the beginning of this study until completion, and to my four children for their love and support.

## Abstract

Throughout the 1990s, the Cambodian forestry sector was in a state of crisis due to widespread illegal logging, corruption, ambiguous forest laws and concession agreements, and weak management and law enforcement. Until the late 1990s, responsibility for natural resource management (NRM) in Cambodia was vested in two line ministries: (i) Ministry of Environment (MOE) - for forest within the Protected Areas; and (ii) Ministry of Agriculture, Forestry and Fisheries (MAFF) - for protected forest and forests outside the PAs. The Royal Government of Cambodia has reformed the forestry sector since early 2000 to engage the communities in natural resource management process through two main forms: (i) the Community Protected Area (CPA); and (ii) the Community Forestry (CF).

Since the start of the CPA and the CF, particularly in Siem Reap province, there is yet specific evidence to be found on how effectively the CPA and CF operate and on the level of socioeconomic benefits gained by the CPA and CF members from their participation in the Community Based Natural Resource Management (CBNRM) activities. This study investigated these issues in one CPA (Popel in Khnang Phnom Commune) and one CF (Thbaeng Lech in Thbaeng Commune) in Siem Reap province, Cambodia.

The specific research guiding questions for this study are: (i) why were the CPA and CF started, and what was the process by which they were established?; (ii) how effective are the CPA and CF in meeting their agreement objectives?; and, (iii) do CPA and CF increase members' household socioeconomic benefits?

To acquire necessary information, 5 sets of questionnaires were developed for 5 different respondent groups. Two rounds of field interview were conducted. The first round was conducted in April 2012, with the assistance of 4 enumerators to interview 73 households - consisting of 21 CPA households, 52 CF households and other key informants. The second round was conducted in May 2012 to validate the data. The researcher reviewed the findings with key informants and natural resource management specialists when the draft report was. The researcher adapted the effectiveness assessment concept used under the ADB *Guidelines for Preparing Performance Evaluation Reports* (ADB, 2006) and the effectiveness assessment framework developed by AVSF (2010) to assess the effectiveness of the CPA and

CF management and Operation. SPSS and Excel spreadsheet were used to analyze the data, drawing the relative frequency distribution and weighted mean.

On the establishment process, it was concluded that: (i) the CPA Popel was established following the government policy and by the projects of development partners, but that the community members were not made fully aware of their roles and responsibilities in the CBNRM process; and (ii) the CF Thbaeng was also established following the government policy and by the development partner projects; and the community members were fully engaged. It was also concluded that the management and operation of CPA Popel is **Less Effective** while CF Thbaeng Lech is **Highly Effective** in delivering resource conservation and livelihood improvement services. A majority of CPA households are poor, with most adults being illiterate. The contribution of forest and NTFPs to the livelihoods in CPA area is high but the households in CF Thbaeng Lech are better off - 56% could read and write. CPA households did not have any land tenure securities, while about 50% of the CF group had land certificates. On the expense aspect, rice and health care are the major expenses for CPA members while rice and housing are the major expenses for CF members. Agriculture investment is the smallest share of expenses (not including labor costs) for both groups. There, the application of better rice farming techniques and greater investment in agriculture (such as improved seeds and inputs) would contribute to the higher general income and thereby improve their livelihoods. The low or very low benefits were reportedly due to restricted access to natural resources as well as the free utilization by people outside their community; about 38% of the members perceived that forest quality had declined. The benefit level in CF group is encouraging: up to 63% of members received high and very high benefits; 25% received neutral benefits; while 2% received very low benefits. The CF forest was poorly degraded when it was given to the CF, but after CF operation, the forest grows well and the members gain more benefits then. To the question of whether they want the CBNRM activity to continue in their area or not? About 67% of CPA members said yes; and 33% could not decide while 96% of the respondents in CF area said yes, and only 4% could not decide.



## **1. Introduction**

### **1.1 Overview**

Forests play an essential role in supporting rural livelihoods in Cambodia. Forests and non-timber forests provide cooking wood-fuel, timber for construction, materials for tools and household items, resins, vines, wild fruits and vegetables, livestock fodder, and medicines. Throughout the 1990s, the Cambodian forestry sector was in a state of crisis due to widespread illegal logging, corruption, ambiguous forest laws and concession agreements, and weak management and law enforcement. Until the late 1990s, natural resource management (NRM) in Cambodia was vested in responsibilities of two line ministries: (i) Ministry of Environment (MOE) for forest within the Protected Areas; and (ii) Ministry of Agriculture, Forestry and Fisheries (MAFF) for protected forest and forests outside the PAs. The RGC has reformed the forestry sector since early 2000 to engage the communities in NRM through two models: (i) Community Protected Area (CPA) if the community is in and near the Protected Areas (under MOE); and (ii) Community Forestry (CF) if the community is located in areas of production forest in the Permanent Forest Estate (under FA/MAFF).

The CBNRM Learning Institute (2008) indicated that Community Based Natural Resource Management (CBNRM) is a rapidly growing approach to NRM in Cambodia. It plays an integral role in poverty alleviation and in sustainable livelihoods and resource management. It is also a key element in the conservation, and decentralization policies and strategies of the RGC.

### **1.2 Research Rationale**

Since the start of the CPA and the CF, particularly in Siem Reap, there is to date no specific evidence of how effectively the CPA and CF operate and what level of socioeconomic benefits have gained by the CPA and CF members from their participation in the CBNRM activities. This study investigates these issues at one CPA (Popel in Khnang Phnom Commune) and one CF (Thbaeng Lech in Thbaeng Commune) in Siem Reap province, Cambodia.

### **1.3 Objectives of the Research**

The objectives of the research are to: (i) understand the reasons and the process for establishing the CPA and CF; (ii) assess the effectiveness of CPA and CF operations in meeting their agreement objectives; and, (iii) examine the socioeconomic benefits gained by the community members from participating in CBNRM.

### **1.4 Research Questions**

The guiding questions for this study are the following: (i) Why were the CPA and CF started and what was the process by which they were started?; (ii) How effective are the CPA and CF in meeting their agreement objectives?; and, (iii) Do CPA and CF increase members' household socio-economic benefits?

### **1.5 Scope and Delimitations**

There are several models of CBNRM in Cambodia. This research focused only on one CPA and one CF, both in the same province. The selected CPA and CF should have been established at least for the past five years to be able to assess their effectiveness and the benefits.

This study used both primary and secondary data. The primary data were collected by interviewing 73 households consisting of 21 CPA member households, 52 CF member households. Government officials from provincial level responsible for these CBNRMs were also interviewed. The secondary data were collected from relevant reading materials - such as from government agencies, NGOs and development partners.

It may be noted that as of 2011, there were 102 CPAs covering a total forested area of 1134,279 ha with 24,887 households (MOE, 2012); and total 495 CFs covering 419,586 hectares. Due to time and budget limitations, the sample size consists of limited interviews and taken from only from one CPA and one CF. Therefore, the quality of the study is limited by these constraints and may not be generalizable to the entire situation of all CPAs and CFs in Cambodia.

## **2. Review of Literature**

### **Legal Framework for CPA and CF**

The centralized system of forest management in Cambodia did not take local rural people's needs into consideration, and the management system (with the commercial concessions in the forestry sector) turned out to be destructive to the forest. In 2000, a reform in the forest law provided more scope for participation from the local users in terms of rights and responsibilities in forest management (Henderson, 2005). The scope for their participations in term of rights and responsibilities are defined in the regulatory frameworks such as (i) Protected Area Law (2008); (ii) Forestry Law (2002); (iii) CF Sub-decree (2003); and (iv) Prakas on CF Guidelines (2006). The following is the summary legal documents relevant to the two CBNRM models.

### **2.1 Protected Area (PA) Law**

The Protected Area Law (2008) defines PA as an area of the State's public properties in land or water territories, including coasts and sea, located in the area established by a Royal Decree or a new area established in the jurisdiction of the Ministry of Environment. These areas are of physical and biological importance and which require management by law with the purpose of protecting and maintaining biological, natural and cultural resources, and shall be sustainably managed in every generation for environmental, social and economic benefits.

#### **2.1.1 Protected Area Categorization**

The Protected Area (PA) law categorizes the protected areas as follows:

- |                        |                          |
|------------------------|--------------------------|
| 1. National Park       | 5. Ramsar site           |
| 2. Wildlife sanctuary  | 6. Biosphere reserve     |
| 3. Protected landscape | 7. Natural heritage site |
| 4. Multiple use area   | 8. Marine park           |

According to the PA law, the Protected Areas, as above, shall each be defined by a Sub-decree. It is to be noted that in 1993, the Cambodian Royal Decree on the Designation and Creation of Protected Areas established 23 PAs in Cambodia under the management of the MOE. These PAs were categorized into seven national parks, ten wildlife sanctuaries, three protected landscapes and three multiple use areas covering about 3,134,471 ha of forestlands.

The actual size might be smaller, due to parts of the PAs being lost to economic land concessions.

### 2.1.2 Protected Area Zoning

Each PA, according to article 11 of the PA law shall be divided into four management zoning systems as the following:

- (i) **Core zone:** management area(s) of high conservation values containing threatened and critically endangered species, and fragile ecosystems.
- (ii) **Conservation zone:** management area(s) of high conservation values containing natural resources, ecosystems, watershed areas, and natural landscape located adjacent to the core zone. Access to the zone is allowed only with prior consent of the Nature Conservation and Protection Administration at the area with the exception of national security and defense sectors.

Small-scale community uses of non-timber forest products (NTFPs) to support local ethnic minorities' livelihood may be allowed under strict control, provided that they do not present serious adverse impacts on biodiversity within the zone.

- (iii) **Sustainable use zone:** management area(s) of high economic values for national economic development and management, and conservation of the protected area (s) itself thus contributing to the local community, and indigenous ethnic minorities' livelihood improvement.

After consulting with relevant ministries and institutions, local authorities, and local communities in accordance with relevant laws and procedures, the Royal Government of Cambodia may permit development and investment activities in this zone in accordance with the request from the Ministry of Environment.

- (iv) **Community zone:** management area(s) for socio-economic development of the local communities and indigenous ethnic minorities and may contain existing residential lands, paddy field and field garden or swidden (*Chamkar*).

Many ethnic minorities were living in or adjacent to the protected areas before the establishment of the protected areas; thus careful study was needed to ensure that the management zoning system did not have negative impacts on their livelihoods, but guarantees their access as in the following provisions of the PA law.

### **2.1.3 Rights of Local Communities under PA Law**

The PA law encourages local communities, indigenous ethnic minority communities, the public and civil society all to participate fully in the provision of and access to information relevant to the protected area management, conservation and development.

It indicates that the state recognizes and secures access to traditional uses, local customs, beliefs, and religions of the local communities, and indigenous ethnic minority groups residing within and adjacent to the protected areas. Access to traditional uses of natural resources and customary practices of local community and indigenous ethnic minority groups on family scale may be allowed within sustainable use zone and conservation zone following guidelines which shall be prescribed in the *Prakas* of the MOE. No *Prakas* has been issued as of today. It also provides MOE the authority to allocate part or parts of sustainable use zone to communities residing within or adjacent to a protected area as the CPA.

### **2.1.4 Definition of Community Protected Area (CPA)**

The PA law defines the CPA as participation of local community or indigenous ethnic minorities in an elected form of administrative structure, recognized by the Natural Prevention and Conservation Administration, with the joint purpose of management and sustainable use of natural resources in a particular part of the protected area, aimed at promoting the standards of living of the local community and indigenous ethnic minorities.

## **2.2 Draft Guideline on the Procedures and Process in establishing CPA**

The draft Guideline on the Procedures and Process in establishing the CPA of the MOE was used as basis for establishment of the CPA. This draft CPA Guideline has not been finalized (as of July 2012). The current draft CPA guideline has 9 chapters and 6 appendixes and each provides specific framework for the CPA establishment and operation.

## **2.3 Forestry Law (2002)**

Article 7 of the Forestry Law reads, “*Among other duties, the Forest Administration shall promote the development of Community Forest agreements and Community Forest programs by providing financial and technical assistance suitable to communities*”.

### **2.3.1 Sub-Decree on Community Forestry (2003)**

The CF Sub-decree defines the CF as a Community that voluntarily initiates to form a group under a Community Forest Agreement in order to conduct development activities and use forest resources in a sustainable manner within a Community Forest in compliance with the provisions of the Forestry Law.

### **2.3.2 Prakas on Community Forestry Guidelines, 21 July 2006**

In 2006, the FA introduced much-needed community forestry guidelines, called *Prakas*. In a series of steps, the *Prakas* clearly established the process for identifying, legalizing, and managing the forests. Although some of the steps still need simplification and greater transparency, their creation was a huge step forward (RECOFTC, 2012).

## **2.4 Concept of Natural Resources**

The term ‘resource’ means something which is usable, and it originally highlighted that nature had the power to self-regenerate; that the *resource* rises again and again (Shiva, 1992). However, the understanding of the concept has changed, and the ability of resources to regenerate is understood as being dependent on the people; the generation of revenues and growth of capital has made people ‘develop’ the resources in a planned manner. As natural resources have become degraded and relatively scarce, it has become necessary to manage the resources in order to keep a continued supply for commercial purposes. According to Shiva (1992, p207) “*Management of natural resources’ has been a managerial fix for resource scarcity resulting from the uncontrolled destruction of nature*”

## **2.5 Concept of CBNRM**

Both the RGC and NGOs in Cambodia began CBNRM in response to the rapid degradation of natural resources. In CBNRM local communities are responsible for the management of the local resources. According to Carson et al. (2005, p. 37), the term CBNRM refers to “a

*diversity of co-management approaches that strive to empower local communities to participate actively in the conservation and sustainable management of natural resources”.* However, he adds that most CBNRM initiatives in Cambodia are more controlled by the government than by communities.

## **2.6 Effectiveness of CPA and CF Community**

The ADB Guidelines for Preparing Performance Evaluation Reports (ADB, 2006) defines effectiveness as the extent to which the outcome, as specified in the design and monitoring framework, either as agreed at approval or as subsequently modified, has been achieved. There are four rating levels: (i) Highly effective - 3 scores; (ii) Effective – 2 scores; (iii) Less effective – 1 score; and (iv) Ineffective – 0 score.

Agronomes and Vétérinaires Sans Frontières (AVSF), an NGO working in Agriculture and Rural Development developed a method to assess the capacity and effectiveness of farmer organizations by looking into 5 key aspects of the organizations: (i) management; (ii) finance; (iii) identity; (iv) communication; and (v) activities of the organizations being assessed. Each aspect will be assessed through sub-indicators.

## **2.7 Concept of Socioeconomic impact**

Barnes and Sebstad (2000) defined impact assessment as a study to identify changes that results from a program by employing methods to establish plausible association between changes experienced and participation in the program. In this research, the scope of impacts is limited to the socioeconomic impacts and only for community member households.

## **2.8 Paradigm of Impact Assessment of CBNRM process**

The major methodological problems that confront the impact assessment of CBNRM relate to attribution and fundability. There are many factors affecting the livelihoods of the rural poor - for example the development of the communication system in Cambodia improves the remittance from migrant workers to rural communities, thus reducing hardship during shock events. This may not be necessarily linked to improved CBNRM process in the communities.

### **3. Research Methodology**

#### **3.1 Data Collection**

This study used both primary and secondary data. To acquire necessary information, 5 sets of questionnaires were developed for 5 different respondent groups. Two rounds of field interview were conducted. The first round was conducted in April 2012 with assistance from 4 enumerators to interview 73 households - consisting of 21 CPA households, 52 CF households and other key informants such as government officials, commune councilors, village chiefs and NGOs officers. The second round was conducted in May 2012 to validate the data.

Secondary data, which includes information about the previous situations (households and community socioeconomic conditions) of the study area, were collected from relevant reading materials from the National Committee for Subnational Democratic Development (NCDD); MOE, FA/MAFF, NGOs and Development Partners.

#### **3.2 Method and Technique of Data Analysis**

Descriptive statistics like mean, standard deviation, percent and frequency are used to describe the socioeconomic status of respondents. Data entry and analysis are done by using computer software packages - SPSS and Excel spreadsheet. Rich descriptive, historical transect and trend analysis was used for qualitative data and to explore and understand the local people's perception of benefits or changes.

Referring to the Effectiveness of CPA and CF concept, the researcher assessed to which extent the objectives, as specified in the CPA or CF agreements, have been achieved or will be achieved by adapting the assessment method developed by the AVSF in Cambodia between 2007 and 2010 to assess the effectiveness of management and operation of the two CBNRM organizations. The AVSF assessment framework looks into 5 key areas: (i) management, (ii) finance, (iii) identity, (iv) communication, and (v) activities of the organizations being assessed. In the author's adopted effectiveness assessment framework, if the CBNRM organization works really well independently, it receives up to 100 points deriving from: (i) 40 points given to management aspect, (ii) 18 points to financial aspect, (iii) 18 points to identity aspect, (iv) 13 points to communication aspect, and (iv) 11 points



given to activity aspect. The researcher also adapted the assessment rating from ADBs' Guidelines for Preparing Performance Evaluation Reports by modifying the rating scale “from 0 to 3 rating level” to “from 0 to 100 scoring level”. Thus effectiveness rating is now classified as: (i) Highly effective - with the total scores between 100 and 75; (ii) Effective - with the total scores of 74 and 50; (iii) Less effective with the total scores between 49 and 25; and (iv) Ineffective - with the total scores between 24 and 0.

For this thesis, the effectiveness of CBNRM models was assessed based on the following:

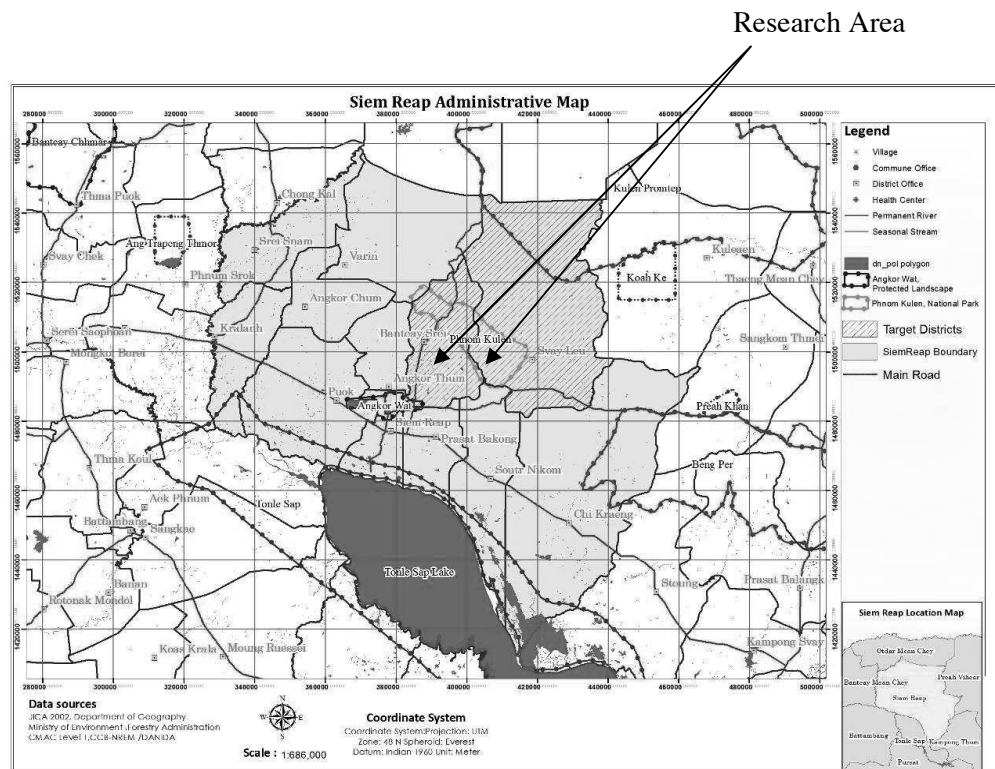
- (i) Management Aspect. The criteria assess (a) whether CPA or CF has a clear organizational structure and whether all the members respect it?; (b) if it has the bylaws and whether members respect them?; (c) whether it has the member list and if is recognized by the local authorities?
- (ii) Finance Aspect: In the section the criteria are: (a) does CPA or CF have capital to contribute the inputs provided by supporting agencies?; (b) does the management committee regularly report the income and expenses of the organization?; (c) do new CBNRM members pay their membership fees?; (d) does the CBNRM use its budget wisely; (e) does it reserve some budget for emergency issues?; (f) does it have a safe to keep money?; (g) does it increase the member and thereby increase the capital?; and (h) does it develop income generation activities for its members?
- (iii) Identity Aspect: the assessment criteria are: (a) whether the CPA or CF is located in the area and has working office or not?; (b) does it carry out some promotional activities about its existence?; (c) does it have a clear demarcated zone for supervision and post forest awareness sign?; (d) does the committee have at least 3 members?; and (e) has the organization been recognized the local authorities and the line ministries?
- (iv) Communication Aspect: the assessment criteria are: (a) does CPA or CF keep contact with NGOs and other agencies to seek financial and technical support?; (b) does it have good relationships with outsiders in order to sell its products?; (c) does it approach local authorities for support over any intervention?
- (v) Activity Aspect: the assessment criteria are: (a) does CPA or CF have at least two activities to implement?; (b) does the committee explain and disseminate

information about the CBNRM?; and (c) has CPA or CF developed any cash saving activity?

### 3.3 Selection of the Study Area

This research covered one CPA - Prey Thom Popel, in Khnang Phnom commune, Svey Leu district, and one CF - Thbaeng Lech, in Thbaeng commune, Banteay Srey district, Siem Reap province. The map of the area is shown in figure 1 below.

Figure 1. Map of research sites (in Siem Reap)



### 3.4 Sampling Procedure

Households to be targeted are from CPA Popel and CF Thbaeng Lech and were determined by the stratified random sampling method (Yemane, 1967) as in indicated in formulation below.

Where:

N : total population of selected CPA & CF

e : standard error 10%

n : sample selected

$$n = \frac{N}{1 + Ne^2} \text{ (Yamane, 1967)}$$

Following the above formulation (Yamane, 1967), 73 respondents were selected for the research. The selected samples were then drawn out proportionally from each CBNRM based on their population level following the formula below:

Where:

$$ni = n \times \frac{Ni}{N} \text{ (Yamane, 1973)}$$

Ni : population by CPA or CF

ni : sample selected by CPA or CF

Based on the above formulation, the research selected 21 respondents from CPA Popel and 52 respondents from CF Thbaeng Lech. The respondents were carefully selected to represent the perception and knowledge of male and female headed households.

Table 1 Subsamples selected from targeted CPA and CF

<b>District</b>	<b>Commune</b>	<b>CBNRM model</b>	<b># Households</b>	<b>Selected households</b>
Svay Leu	Khong Phnom	Prey Thom Popel	75	21
Banteay Srey	Thbaeng Lech	Thbaeng Lech	189	52
<b>Total</b>			<b>264</b>	<b>73</b>

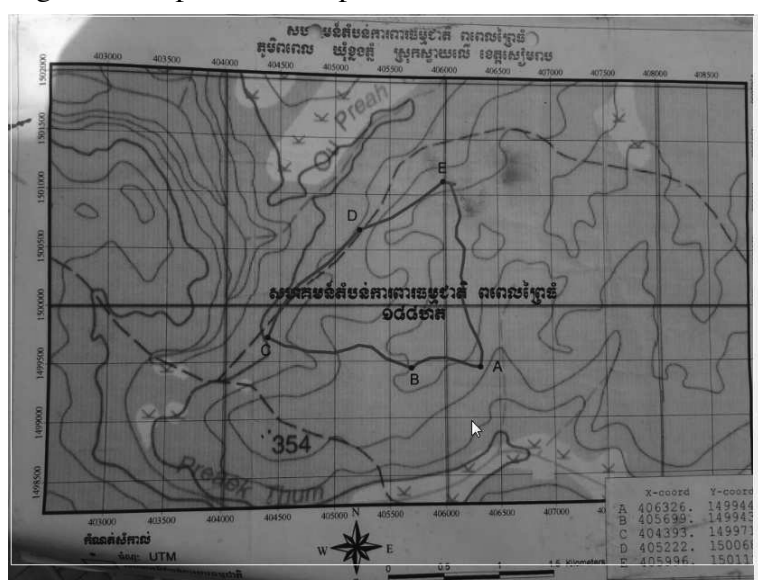
## 4. Results and Discussion

### 4.1 Findings for CPA Popel

#### A. Overview of CPA Popel Preythom and its main National Park

CPA Popel Preythom is known as CPA Popel is within the Popel village, Khnang Phnom commune, Svay Leu district, Siem Reap province. All households of the Popel village are the members of this CPA. In 2003, CPA Popel had 59 members, but as of April 2012 the members reached 75 households. This CPA was granted 189 ha of forestland within the Preah Cheyavaraman Norodom National Park (figure 2) for their conservation and sustainable utilization purpose.

Figure 2. Map of CPA Popel



In 1998, the government granted 2,400 ha of the Kulen National Park for military personnel development, in response to the request from the military region number 4. This granted area covers main touristic places that are rich in important historical temples and attractive waterfalls. This area is being managed and developed by a private firm belonging to a parliament member from Siem Reap. All visitors travelling to Khnang Phnom have to pass through this area and non residential people have to pay an entrance fee at the check point which is located at the lower edge of the mountain of about 11 km away from Preah Angthom (The big Buddha) or about 14 km from Popel village. Thus general access of tourists and non residential visitors to Khnang Phnom commune is fee-

based. No portion of the fees paid by the visitors is distributed to Khnang Phnom commune for commune development purposes. There has been some *ad hoc* arrangement for infrastructure development in the commune supported by the firm that manages the area. It is thus difficult for any communities in the Khnang Phnom to arrange ecotourism activities in their communities as visitors might be reluctant to pay additionally in order to visit the community. Also the natural resources in the communities are much less attractive than in the areas managed by the firm. It was observed that community members could sell their forest by-products and handicrafts as souvenirs to tourists, and it was also observed that there were many of the same products being sold on the local market, and there was a limited amount of sales. There are rumors of fake forest by-products being sold on the market for tourists. If such rumors are true and are allowed to continue, these will discredit the community as a whole in the future and will hamper the community efforts in selling their products.

#### **B. The Reason and Process for Establishing CPA Popel**

The researcher found that the establishment of the CPA Popel resulted from external factors, and there was not enough evidence that the internal factors played a part.

The external factors were the government policy and the strong government reform in the forestry sector. There were threats and pressure on forest within the National Park. Development partners such as FAO and DANIDA were fully engaged at that time and supported Siem Reap Provincial Department of Environment to engage the communities living in the protected areas in natural resource conservation.

There was no evidence of internal factors. In the past the people in the CPA area used to move freely from one place to another and they used the resources at their will. Suddenly they were introduced the new management regime in which their access was restricted.

#### **C. Effectiveness Assessment of CPA Popel**

Based on the method and technique of data analysis and the assessment results, the management and operation capacity of both CPA Popel is assessed as Less Effective (with total score of 42 out 100) in delivering services and activities stipulated in its statute. This is based on:

1. **The management aspect of the CPA Popel is weak.** Although the CPA has a very clear organizational structure, only a few people knew about it. During the focus group discussion nobody knew that the statute or not. The researcher found it in the pile of papers belonged to the CPA chairman. The CPA chairman did know that he had it as he could not read and write. The members list of the CPA is part of the statute that had been fully endorsed by local and national authorities. The researcher reviewed the contents of the CPA statute and found that the wording in the statute were so technical and were not easy to understand.
2. **The financial Aspect of the CPA is weak.** The CPA does not have any capital to contribute to the inputs provided by other supporting agencies. As there is no capital to manage, the committee members have not had experience in making financial reports. There was no financial support provided by the commune council and other sources.
3. **The Identity aspect of the CPA is just above average.** They do not have a working office. Normally people just meet beside the house of CPA chairman. However, as the village has a community meeting hall, the community members could hold meeting over there. This CPA has an administrative map, prepared by the MOE (figure 2). The CPA has had visible and concrete poles for the demarcation of their forestland. This CPA is recognized by all authorizes at the subnational level as well as recognized by the MOE.
4. **The Communication Aspect of the CPA is weak.** This is characterized by the very limited contacts with other outsiders including NGOs in order to get financial and technical support.
5. **The Activity Aspect is weak.** Many activities stipulated in the statute were not implemented to a satisfactory level. During the study, there were a lot of warning signs “អី” in Khmer and it translated as “Don’t” painted on trees as well as information about the fine or punishment for anyone that grab the land or clear the forest within the protected area. The CPA has a committee of 9 members and they sometime carried out patrolling activities. However, the members and the committee members said that they do not really have clear roles to protect the forests. Some powerful people could come into their forest and log the trees. The situation improved just months before the study, due to the warnings made by the Prime Minister to stop logging the trees. Some

members viewed their leaders as working for the national park team rather than working for the interest of the CPA members.

#### **D. Household Characteristics in CPA Popel**

The households of the CPA members have the following characteristics:

- **Most households' heads are illiterate, and there is an average of 3 dependents per household.** Households have an average of 5 persons, with a standard deviation of 1.6. Women constitute 55%. About 62% of respondents did not have any education while the remaining 38% had completed only grade 1, but they could not read and write properly. About 90% of the respondents said that they lacked food at least one month every year. During the field visit, the World Food Program provided food aid assistance to the villagers.
- **The house is generally small and in poor condition.** The average house size is 32 m<sup>2</sup>. The smallest house is 9m<sup>2</sup> while the biggest is 63m<sup>2</sup>. It is generally built above the ground with minimum 1.5 meters (from the ground to the floor) with wooden poles with the diameters of about 12cm.
- **Construction materials are generally made of thatch and wood.** About 52% of houses have wooden wall while 48% has thatch wall. About 53% of houses have thatch roof, 33% have zinc and 14% have tile roofs. The thatch wall and thatch roof can last about 4 years. Poor families tend to live in thatch roof and/or thatch walls while the better off families tend to live in wooden wall and or zinc or tile roof.
- **Latrines have never been introduced.** No families have toilets in their house premises. There is no evidence that latrine will become a preferred household facility in this CPA.
- **Kerosene lamp is the most used lighting tool in CPA households.** About 90% of the CPA members used the kerosene lamp for lighting, 5% used the battery and another 5% use generator for lighting. The villagers who have either battery or generator for lighting still use kerosene lamps in parallel or as their back up.

#### **E. Land Tenure Security in CPA**

Land use management and planning in CPA is complicated and needs improvement. Although every family has homestead land, none of them has land certificate. With a

standard deviation of 1,518 the member of the CPA has an average homestead land size of 1,074m<sup>2</sup> to build their houses. Villagers do not have any home gardening activities beside their house.

About 81% of villagers had upland with an average size of 1.85 ha (with a standard deviation of 1.8 ha), while 19% of them do not have upland. The distribution of upland is indicated in table 2 (and figure 3), below. As the land is within the national park, nobody had any type of proof of land ownership. Most respondents reported that they had 5 plots of upland and every year they can slash and burn and cultivate rice only on one plot. The plot that is used this year will only be used in the next 6 years. No plots are allowed to grow any long-term cash crops or non-native trees. Rice cultivation remained highly traditional and rain fed. People had to slash the forests, leave them dried, and then burn them all. A few weeks later, they cultivate the rice and wait for the rains. The villagers usually work in groups helping each other. The seeds applied into the holes were a lot. The researcher did a random check by counting the paddy seeds and found 22 grains applied for that selected hole. The average rice yield is below 1 ton per ha. Most villagers said that they usually have a long period of food shortage every year.

Table 2 Upland holding size

Upland	Upland size	Frequency	%
1	No land	4	19%
2	Less than 0.5 ha	3	14%
3	0.5 – 1 ha	2	10%
4	> 1 ha - 2 ha	3	14%
5	> 2 ha - 3 ha	4	19%
6	> 3 ha	5	24%
	<b>Total</b>	<b>21</b>	<b>100%</b>

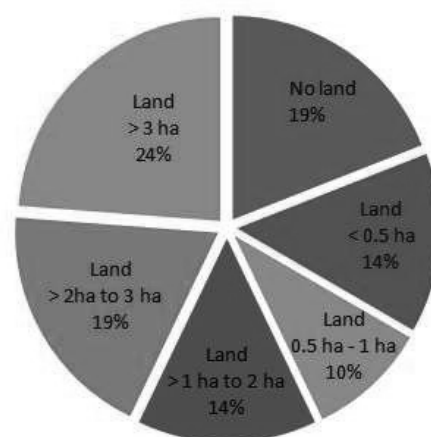


Figure 3. Distribution of Upland



## **F. Household Income and Source of Income for the Last 12 Months**

Agriculture and NTFP are the main source of income for CPA members. The average annual income for CPA member is 3.4 million riels. The lowest income is 0.6 million and the highest income is 9.1 million. The highest source of income for CPA members is agriculture representing about 84% of the total income, followed by forest and NTFPs (11% of the total). The income from non-farming activities is 5% of the total income. The use of wood, fruits and plant from forest for cooking consumptions and for medicinal purpose is not included. If these are monetized the share of NTFPs would be higher.

## **G. Household Expenses for the Last 12 months**

Rice and health care are the major expenses for CPA members, and agriculture and education are their least expenses. The average annual expense for CPA household is 3.8 million riels. About 2 million or 52% is spent on food, 1.5 million or 41% is spent on nonfood and 0.3 million or 7% is spent on social activity. About 1.32 million, or 67%, of expenses on food was spent on rice and about 0.81 million or 54% of the expenses on non food items was spent on health. The expenses on education and agriculture were at 3% and 3% of the expenses on non-food item respectively.

## **H. Benefits Gained from CBNRM**

The CPA members responded as follows: (i) 29% of the respondents received very low benefits; (ii) 48% received low benefits; while 24% received neutral benefits. The respondents of low and very low benefits informed that they were free to use the forest resources before the establishment of the CPA.

## **I. Preference for CBNRM to Continue in the Community**

The CPA members responded with the followings: about 67% of the CPA members said yes and 33% could not decide. The respondents, who wanted the CPA to continue the activities, informed that the CPA process could be good for them if management would be improved. The respondents who could not decide said that this CPA was badly managed and the people from outside the CPA could use their resources freely and were not confident if the management could be improved.

## **J. Negative Impacts from CPA process**

On the questions whether they received negative impacts from the CPA process or not, about 85% of CPA members said that they did not receive any negative impacts; the remaining 15% said that they received impacts in various forms. The negative impacts were explained as mainly being that in the past they could use any forest resource freely but now they have been excluded. They also said non-community members who had strong links with officials could come into their CPA area and log the trees and nobody dared to stop them.

## **K. Perception on Impacts on Forest**

On the perceptions of impacts on forest after the start of the CBNRM in their communities, about 43% said the forest was stable; 38% said that the forest had decreased; and 19% said the forest had increased. The respondents who considered the forest had decreased informed that there were forest logging activities carried out by outsiders particularly people with good connections with some responsible officers.

## **4.2 Findings for CF Thbaeng Lech**

### **A. Overview of Community Forestry (CF) Thbaeng Lech**

The CF Thbaeng Lech (also known as CF Prey Khbal Teuk) is within the Thbaeng Lech village, Thbaeng commune, Banteay Srey district, Siem Reap province. All the households of Thbaeng Lech village are the members of the CF Thbaeng Lech. As of January 2012, CF Thbaeng Lech has 189 households or 873 persons. This CF has been allocated a forestland of 210 ha. In 2007, the number of the families in this village was 144 or 386 persons. The access to the village can be made easily and freely due to the recently improved rural roads in the commune Thbaeng. The distance from the commune to the district center is 16 km and 45 km to the provincial town with good laterite road.

### **B. The Reasons and the Process for Establishing the CF Thbaeng Lech**

The researcher found that that the establishment of the CF Thbaeng Lech resulted from both external and the internal factors. The external factors were the government policy and the government reform in the forestry sector, while the internal factor was the strong

interest from villagers and local authorities. When the villagers learned that they could participate in CBNRM, they started forming groups, elected their management committee and drafted their by-laws following the Forestry Administration CF Guidelines. The process of receiving recognition at the subnational level was completed in 2001, including the endorsement from the chief of Thbaeng commune, governor of Banteay Srey district, Chief of Forestry office, director of the department of agriculture, and the governor of Siem Reap province. Finally, the CF agreement was signed with MAFF in November 2007. Based on the information obtained from the field, at the initial stage of the CF establishment, forest conditions at the CF site were very bad. Most big trees in the CF site had disappeared. Many people including powerful military personnel were seeking the opportunity to grab and clear the forestland for agriculture or speculation purpose.

### **C. Effectiveness Assessment CF Thbaeng Lech**

Based on the adopted assessment method and techniques of data analysis, the management and operation capacity of CF Thbaeng Lech is assessed as Highly Effective in delivering activities stipulated in its statute and the CF Agreement based on the following:

- 1. The Management Aspect of the CF is excellent.** The CF has very clear organizational structure, and all the members know about it. The members of the CF were recognized by the village chief and commune chief and it is part of the statute that had been fully endorsed by the Forestry Administration. The management team has a clear management tools, and activities were carried out in a systematic manner.
- 2. The financial Aspect of the CF is very good.** The CF has about 11 million riels (with an exchange rate or about 4,000 riels per US dollar this is about US \$2,750) as revolving fund. It was reported that the CF received financial support from an FAO funded project in 2005 with an amount of 4.5 million riels for a start of a community revolving fund scheme and recently the CF sold 30,000 young trees for housing construction and received about 3 millions riels and the remaining 3.5 millions are generated from the interest repayments. Their forests have grown up to a stage that they can extract wood from time to time in order to generate CF working capital, as well as to improve the growth of the remaining trees.

3. **The Identity Aspect of the CF is assessed as very good.** CF has a working office constructed in 2005 under the DANIDA- financed project and it remains in good condition. This CPA has an administrative map prepared by the forestry administration and the committee uses this map regularly to present to outsiders.
4. **The Communication Aspect of the CF is excellent.** The committee members maintain excellent contacts with NGOs and other agencies to continue having access to financial and technical support for the CPA members.
5. **The Activity Aspect of CF is very good.** They regularly carry out conservation activities, and have so far replanted 4,500 trees since 2000 (and some of them reached 5 meters in height). The committee members were very proactive in protecting the forests in the CF zone. They stopped people from logging or cutting their forests, regardless of their ranking. The forests were degraded when they were given to the community, as all big trees had been logged. But now trees have regenerated from their lower part of the trees that were left by loggers. They also assisted their members on livelihood improvement. Most members respected their rule and regulations and do not encroach on their community forest, but some members cut trees in other places, such as in Popel CPA, where the law enforcement was weak (and young trees were cut and stored nearby their houses during the research).

#### **D. Household Characteristics in CF Thbaeng Lech**

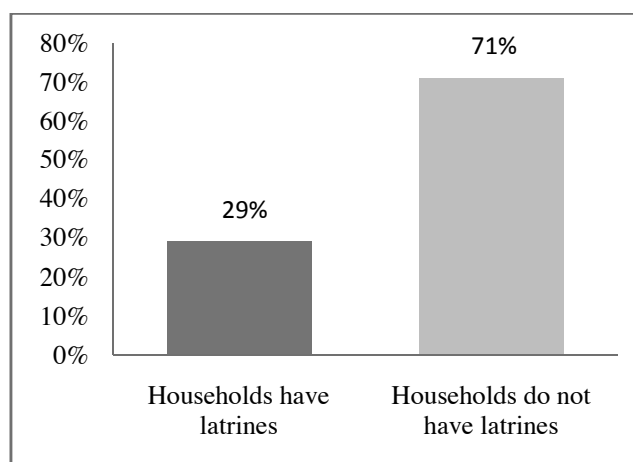
The households of the CF Thbaeng Lech have the following characteristics:

- **Most household heads can read and write. A household has an average of 3 dependents.** CF has an average of 5 persons per households, with a standard deviation of 1.8. Women constitute 54% of the family members. About 44% of respondents did not have any education, 40% had spent between 1 to 3 years in the class before, 8% attended between grade 4 to 6; and 8% attended between grade 7 and 12.
- **The houses along the main roads are generally big and in good condition, while houses far from the main road are generally small and in poorer condition.** The average house size is 37.5 m<sup>2</sup>. The smallest house is at 9m<sup>2</sup> while the biggest is 80m<sup>2</sup>. The house is generally built above the ground with a minimum of 1.5 meters from the ground to the floor. Some of them are built with wooden poles with diameters of about

15 cm and some of others are built with concrete poles of about 25cm in diameter about 4 meter above the ground. The houses built on concrete poles are generally big and reside along the main road.

- **Construction materials have gradually shifted from thatch and wood to other longer-lasting materials such as zinc, tiles and concrete.** About 48% of houses have wooden wall, 44% have thatch wall while the remaining 8% have other kind of walls (zinc or bricks). About 29% of houses have thatch roof, 37% have zinc and 35% have tile roofs. The house floor is generally constructed with wooden planks.
- **Latrine in the house premises is a new concept and is fast developing.** About 29% of households have latrine in their house premises while 71% do not yet have. Most of the latrines were supported by NGOs with villagers' contribution. The number of households to have latrines will increase in the coming years as some of others are planning to construct.

Figure 4. Households with and without latrines



- **Kerosene lamp is the most used lighting tool in CF households, but other tools have become increasingly used.** About 63% of the CPA members use the kerosene lamp, 25% used the battery, 6% use generator for lighting, and 8% used the biogas energy. It is to note that biogas energy has been recently introduced into this village.

### **E. Land Tenure Security**

Land management and planning in CF is improving. CF members have an average homestead land size of 2,324m<sup>2</sup> to build their house. About 43% of households have land certificates, while 57% of household do not have. Many households had their home

gardening (growing vegetables). About 77% of members had rice field with an average size of 1 ha; about 10% of members had an average of 0.6 ha for Chamkar (cash crop plot); 4% of them had forestland with average of 1.5 ha while 13% of the CF members do not own any productive land (except the homestead). Rice farming is one of the main agriculture activities with an average yield of 1.5 tons per ha. Some families practice modernized rice farming techniques and receive about 3 tons per ha.

#### **F. Household Income for CF Thbaeng Lech for the Past 12 Months**

Off-farm activity and Agriculture are the main sources of income for CF members. The average annual income for CF member is 4 million riels, with a standard deviation of 10.1 million. The lowest income is 1 million and the highest income is 15.9 million. The highest source of income for CF member is from off-farm activities representing 50% of the total income, followed by agriculture- 37%; remittance- 7%; and NTFP- 4%.

#### **G. Household Expenses for CF Thbaeng Lech for the Past 12 Months**

Rice and housing are the major expenses for CF members, and agriculture and traditional ceremonies are their least expenses. The average annual expense for CF household is 4.6 million riels. About 2.4 million, or 52%, is spent on food, 1.8 million, or 39%, is spent on non-food while 0.4 million, or 9%, is spent on social activities. About 1.61 million, or 68%, of their expenses on food was spent on rice and about 0.77 million (43%) of the expenses for non-food item was spent on housing. The expenses on agriculture was 1% of the non-food items and 0.05 million or 13% of the expenses on social activity was spent on traditional ceremonies.

#### **H. Benefits Gained from CBNRM**

The responses from CF members were as follows: (i) 2% said that they received very low benefit; (ii) 15% said that they received low benefits; (iii) 25% said that they received neutral benefits; (iv) 52% informed that they received high benefits; while (v) 6% said that they received very high benefits. This reflects the fact that before the start of the CF the forest was degraded and they did not receive enough benefits from the degraded forest. Specific examples of benefits are: a number of about 60 families received wood for the CF

forests for house construction, and 20 families received some woods to build shelters for traditional ceremonies or weddings. Now the forests are regenerated, people can have better access to forests and NTFPs from their CF activities.

#### **I. Preference for CBNRM to Continue In the Community**

About 96% of the CF members said yes, and only 4% could not make decision. The respondents who wanted the CF activities to continue reasoned that before the CF started, the forest was degraded and they were not involved in forest management. This was confirmed by all interviewees and through the transect walk during field visit. The members are happy as the forest grows well and they can participate fully in natural resource management and utilization. The people who could not decide said that they were not much involved in forest management and utilization as they earned income from outside the community.

#### **J. Negative Impacts from CPA or CF process**

On the question of whether they received negative impacts from CBNRM, none of CF members said that they did not receive any negative impacts.

#### **K. Perception on Impacts to Forest**

On the perception of CF impacts on forest after the start of the CF in their community, about 79% of the CF members considered that the forest had increased while 21% said that the forest was stable. The researcher walked through the community forest and found that the forest was in good shape. The government representative working in the forestry cantonment confirmed that the forest is much better than when it was given to the community.

### **5. Conclusions and Recommendations**

General access of visitors to CPA Popel and other communities in Khnang Phnom commune is fee-based. The income from entrance fees is not shared with communities, but for the firm's operation and maintenance and profit.

It is concluded that the CPA Popel was established by the Siem Reap Provincial Department of Environment in collaboration with Siem Reap Forestry Cantonment with the technical and final support from development partner (FAO). There was very limited community awareness and participation in the CPA establishment process. The management and operation capacity of CPA Popel is **less effective** in delivering its services stipulated in its statute, and might have been better if there were adequate legal instruments for establishment and operation of this CPA.

The socioeconomic status analysis revealed that most households' heads of CPA Popel are illiterate. Households have an average 5 members, a couple and 3 dependents. The house is generally small and in poor condition. There is no toilet in any house premises. Kerosene lamp is the most used lighting tool in households. All households do not have land titles. The main crop is rice, and rice farming is highly traditional, swidden and rain fed with an average yield of below one ton per hectare. About 90% of CAP families are food insecure. They lacked food at least one month in a year. At the time of the assessment, community was one of the targets for the World Food Program to provided food aid assistance.

Agriculture and NTFPs are the main source of income for CPA members. The share of NTFPs would be higher if the use of wood, wild fruits and plants for cooking and consumption or for medicinal purpose are considered as income. On the expenses side, rice and health care are the major expenses for CPA members and agriculture and education are their lowest expenses.

It can be concluded that the CPA households received low benefits from their participation in the CBNRM process. Although the contribution of NTFPs to CPA livelihoods is higher compared to CF Thbaeng Lech, the question in this regard was to probe the benefits received after and before they joined CPA. Although, they perceived that they received low benefits, they wanted the CPA to continue operating in their community with recommendations to improve CPA management and operation. Regarding the negative impacts, the majority did not receive any impacts from CPA process but as many as 15% informed that they received negative benefits in some forms such as tighter restriction on their access to use the resources. On the perception of impacts of CPA process on forest, as many as 60% perceived that the forest is now either stable or has increased, while about



40% perceived that the forest has decreased. It is concluded that forest in the CPA area deserved better protection.

The CF Thbaeng Lech was established by both external and internal factors. The external factors were the government policy and the government reform in the forestry sector. Development partners were supportive of the reform process. There were adequate legal frameworks and strong commitment from the national and subnational agencies to support the establishment and operation of this CF. As for the internal factors, the villagers of Thbaeng Lech and the local authorities wanted to establish the CF to manage and use the forest on a sustainable manner. The management and operation capacity of CF Thbaeng Lech is **highly effective** in delivering its services as agreed in the CF statute and CF agreement.

The result of socioeconomic analysis revealed that most households' heads of CF Thbaeng Lech can read and write and each household has an average five members: a couple and 3 dependents. The houses along the main roads are generally big and the houses far from the main road are generally small. The number of big houses is increasing while the construction materials shift from thatch and wood to long lasting materials such as zinc, cement, bricks etc. Latrine in house premises has been recently introduced by government and NGOs and it is fast growing. Kerosene lamp is the most used lighting tool in CF households, but other tools such as battery and biogas have become increasingly used. Regarding land tenure security, about 43% of households have land certificates while 57% of household do not have. Wet season rice is the main crop with an average yield of 1.5 tons per ha. Some families practice modernized rice farming practice receiving an average yield of 3 tons per ha.

Off-farm activity and agriculture are the main source of income for CF members. Rice and housing are the major expenses for CF members and agriculture and traditional ceremonies are their least expenses.

Regarding the benefits from the CF process, up to 63% of respondents received high and very high benefits, 25% received neutral benefits; and 12% received low and very low benefits and about 96% said that they wanted the CF to continue in their area while only 4% could not decide. On the negative impacts from CF process, no CF members said that

they received negative impacts. On the perception of CF impact on the forest, about 79% of the members thought that the forest has increased while 21% said that the forest is stable. The government official working in the forestry cantonment confirmed that the forest is much better now than when it was given to the community as community forestry.

## **5.1 Recommendations**

In order to improve the effectiveness of the CPA operation and management the researcher recommends the CPA Popel and stakeholders to implement the following measures:

- Raise awareness of CPA members about the CPA process, their roles and responsibilities and the advantages to be gained from joining the CPA. All members should understand and respect their internal rules and regulations. They should make an effort to have the people outside their community to be aware of and actively respect their rules and regulations as well. In order to achieve this, they should seek technical and financial support from NGOs devoted to forestry and environment and should not simply wait for them to come to their communities.
- Identify available resources in the CPA area (such as the already logged trees left over by the illegal loggers or other dead woods) and take necessary actions (such as to obtain permission from the national park director to transport the wood for sale) to get financial resources so that the CPA can help its members.
- Advocate CPA needs to be included in the commune development plan (which is carried out on an annual basis with villager participation).
- Improve the financial management capacity and exercise transparency in managing the CPA funds. Sharing the financial records with all the members on a regular basis will improve member confidence.

The researcher recommends the government and other stakeholders to look into the land ownership and land use issues in the CPA area. As CPA area is located on the higher part of Siem Reap watershed, land use and planning practices should be reviewed as soon as possible in order to reduce the impacts on the natural resources and the environment. Proper environment impact analysis from slash and burn agriculture should be conducted, and good agricultural practices should be introduced. Improved rice farming activity will increase the general income for the CPA households, thereby improve their livelihoods.

The leak of household resources for CPA members is due to the high expenses on health care. The researcher recommends that hygiene and sanitation awareness and improved health care access are provided to CPA members.

To raise benefits level of CPA households, the researcher recommends that CPA committee and CPA stakeholders should reinforce member understanding and respecting the CPA statute and other internal regulations. They should not allow non-CPA members to use the resources in the CPA area (as indicated in the statute). With the relatively high perception that the forest has decreased (as reported by about 40% of interviewees), the CPA committee should assess the actual situation of the forest to see whether it deserves better protection or it is just a wrong perception. Based on the result of the assessment, all CPA members should participate in planning and implementing any key actions.

The current access to public and private services for CPA Popel and other communities in Khnang Phnom commune is difficult or expensive compared to other communities in the province of Siem Reap due to its remoteness and fee-based access for non residential visitors or tourists to these communities. To improve the community livelihoods and wellbeing, the government may consider engaging the communities in natural resources conservation on the higher watershed area in order to make the area remain attractive to visitors as well as to maintain the regular flow of waterfall in the long run, and in return reward them on a regular basis with some compensations from the entrance fee.

To improve the overall understanding of the CPA members about their roles and responsibilities, the government may need to simplify the wording used in the CPA statute. Chapter 7 - which describes the extraction and utilization of the natural resources in the CPA -area is particularly difficult to understand. For example, article 30 of CPA People says, *“The collection of natural resources following the technical standard is allowed”*; and article 31 reads, *“The extraction of natural resources must follow the technical standard of the Protected Area etc.”* But what kind of technical standard, or if the technical standard at the CPA level exists, is not well known by the CPA members. This raises the question of how and why the community members prepared their own statute that cannot be understood among themselves. Therefore, the government - particularly the Ministry of Environment - should simplify the language used in the CPA statute and raise

awareness about community member roles and responsibilities and their benefits. The government should also empower the community members and local authorities to make decisions and take stronger ownership of the CPA process, rather than just report to or receive the decisions from the protected area director as described in various articles of the statutes. A strong sense of ownership and full participation of community members in decision-making and in activity implementation will eventually contribute to effective CPA management and operation.

In terms of legal framework for CPA, the article 25 of the Protected Area Law reads that *“Guidelines on the procedures and process of establishment of the community protected area shall be determined by Prakas of the Ministry of Environment.”* As of the research date, this important documents remains in draft form. The finalization of the Guidelines and put it into use through the *Prakas* will make the establishment and operation of CPA easier and more formal.

Article 40 the Protected Area law reads, *“Setting forest fire in the protected areas is prohibited.”* Thus, the community should be assisted to move away from swidden agriculture practices. The farmers should receive some benefits if they used only few plots of their current swidden land for agriculture purposes and use the remaining plots for forest conservation and replanting trees. This will depend – in part on future government policy on Payment on Ecosystem Services (PES), and community Popel should be identified for any PES scheme pilots if there are any.

The researcher congratulates CF Thbaeng Lech for its highly effective management and operation capacity in delivering livelihood improvement and natural resource conservation activities, and recommends the CF Popel to continue its effort and activities.

The community seems to have the necessary elements to turn the area into one for community based ecotourism. These elements include: (i) community cohesion is a very good social asset; (ii) good connectivity and infrastructure; (iii) a good regenerated forest; and (iv) spring water etc. Therefore, the community should look for external support to conduct a proper feasibility study if community based ecotourism is considered.

In the areas of land tenure security and land use, the researcher recommends the government and other stakeholders to increase the number of households having the land titles from currently 43%. Also, the community members could increase the household income from increased rice productivity through improving rice farming techniques. Therefore, community members should apply new rice farming technique as well invest more in agriculture which include using improved seeds and necessary inputs to increase rice productivity. It is expected that the increased rice production will contribute to overall increase in household incomes and thereby improve their livelihoods and their dependency on forest will decline. The researcher recommends Thbaeng Lech CF members to reconsider their action not to cut trees outside their community.

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## **About MINZAS**

MINZAS program is a partnership program of Mekong Institute and New Zealand Embassy in Bangkok. The objective of this program is to enhance research capacity of young GMS researchers by providing a structured learning and field research application program for 36 master's degree students from provincial universities in Cambodia, Lao PDR, Myanmar and Thailand.

Through a comprehensive supports – trainings, roundtable meeting, constructive advices from MI advisors including financial supports – which are to be and have been provided to scholarship grantees, students' research skills and conduction of research deem to be developed. The completed research works will be published in 'MI Working Paper Series' and disseminated to related agents among the GMS.

The MINZAS Program is designed for 3 cycles; each cycle lasts for one year with 4 phases:

- Phase One: Training on Research Methodology
- Phase Two: Implementation of Sub-regional Research in Respective Countries
- Phase Three: Research Roundtable Meeting
- Phase Four: Publication and Dissemination of Students' Works in 'MI Working Paper Series'

### **The research cycle involves:**

- One month training course on GMS Cooperation and ASEAN Integration, research development and methodology. The students will produce their research designs and action plans as training outputs;
- Technical assistance and advisory support to MINZAS scholars by experienced mentors and academicians in the course of the research process;
- The scholars will present their research papers in a round table meeting attended by subject experts and their peers;
- Scholars will revise their research papers and improve as necessary, based on experts and peer review during the roundtable meeting;
- Publication of reports as MI working paper series.

**The Mekong Institute (MI)** is an intergovernmental organization with a residential learning facility located on the campus of Khon Kaen University in the northeastern Thailand. It serves the countries of the Greater Mekong Subregion (GMS), namely, Cambodia, Lao P.D.R., Myanmar, Thailand, Vietnam, Yunnan Province and Guangxi Zhuang Autonomous Region of PR. China.

MI is the only GMS-based development learning institute, chartered by the six GMS Governments, offering standard and on-demand capacity development programs focusing on regional cooperation and integration issues.

MI's learning programs services caters to the capacity building needs of current and future GMS leaders and policy makers on issues around rural development, trade and investment facilitation, human migration, with good governance and regional cooperation as cross cutting themes.

## Vision

Capable and committed human resources working together for a more integrated, prosperous, and harmonious GMS.

## Mission

Capacity development for regional cooperation and integration



## MI Program Thematic Areas



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