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Master's Thesis of Public Administration

**The Community Forestry
Implementation in Cambodia:**

**The Role of Rural Community's Participation in
Forest Governance**

**캄보디아의 지역 산림 정책의 집행에
관한 연구:**

산림 거버넌스에의 참여를 중심으로

August 2017

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The Community Forestry Implementation in Cambodia:

The Role of Rural Community's Participation in Forest Governance

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Submitting a master's thesis of Public Administration

April 2017

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Abstract

The Community Forestry Implementation in Cambodia: The Role of Rural Community's Participation in Forest Governance

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This research studies on the role of rural community's participation in forest governance in Cambodia. It aimed to identify the important role of local community in participation in forest governance policy through community-based management. The research looked at how local community participate in community-based forest governance and how the increase in awareness could influence on key factors of forest governance including perception and attitude change, participation in forest governance, accountability and law enforcement network to prevent illegal activities within community forestry's boundaries. The participation of rural community is important in enhancing good forest governance, strengthening collaboration with governance and resolving the forest management issues within the forest areas.

In this study, researcher used qualitative methodology based on both primary data and secondary data to describe and explain the findings. Researcher collected primary data through key informants' interview and

survey with local community in selected study sites, while the secondary data was obtained through literature reviews, academic journals and various relevant documents.

The research found that the rural community's participation in community forestry arrangement has increased awareness of local community on the importance of forest resources, caused changes in perception and attitude towards resources utilization, and motivated their participation to forest governance in order to ensure sustainable forest management and the robust and dynamism of cooperation between community people and stakeholders. The studied community has shown high degree of community participation as the managers of resources by devising, negotiating, enforcing their power in managing their territorial resources.

Keyword: participation, forest governance, community forestry, perception

Student Number: 2015-24464

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List of Acronyms

CF	Community Forestry
CPA	Community Protected Areas
CFA	Community Forestry Agreement
CFMC	Community Forestry Management Committee
CFMP	Community Forestry Management Plan
GDANCP	General Department of Nature Conservation and Protection
FA	Forestry Administration
MAFF	Ministry of Agriculture, Forestry and Fisheries
MoE	Ministry of Environment
NFP	National Forest Programme
PA	Protected Areas
RGC	Royal Government of Cambodia
SFM	Sustainable Forest Management

Chapter 1. Introduction

1.1. Introduction

“Forest refers to spanning more than 0.5 hectares with trees higher than 5 meters and a canopy cover of more than 10 percent, or trees predominantly under agricultural or urban land use.” (FAO, 2012)

The forest areas encompass vast areas of forest cover and rural villages whose livelihood depends on forest resource. It is one of the most important natural resources to sustain livelihood, provide natural habitats, prevent climate change and natural disaster (Madaan, 2016). In Cambodia, forest resources have the potential contribution to livelihood and income generation for rural people because they are considered to be renewable resources that can be used repetitively since it can be replaced naturally (Hendee, Dawson, & Sharpe, 2012), and one of the nation’s most valuable natural asset to the people of Cambodia (Forestry Administration, 2010).

Cambodia has long experienced vast effect of illegal logging due to large-scale forest concessions and weak governance in the 1990s leading to unsustainable resources utilization that jeopardized the effectiveness of forest governance policy in the country. Forest governance in Cambodia is regarded as the ability of the government to operationalize forest policies and implement plans based on transparent and accountable system, enforce the law, and response to threats and impacts (Forestry Administration, 2010). While the forest has substantially provided the basis for rural livelihoods, they have also been a source of conflicts and exploitations. Between 1980s and early 2000s, forest resources were used as a source of finance generation for political activities and restoration works giving rise to numerous large-scale concessions which create a system that gave leeway to illegal and unsustainable logging. As a result, the overall forest cover has been decreased dramatically. This can be explained by the large domestic demands and improper governance in dealing with the smuggling of forest timbers across the border to neighboring countries (FAO, 2016).

1.2. Problem statement

Over the years, Cambodian government has sought to boost local economy by adopting a sound environmental-friendly investments into the country. Many of investment projects are related to agricultural and agro-industrial development over the state-owned forest areas. These activities aim to create an employment opportunity and boost regional development potential through the establishment of infrastructure for the benefit of local communities and stimulate overall national economics. However, these ambition does not come without its share of troubles. The development of infrastructure and rapid development of economics in the region has opened the way access to the forest and increase in number of new migrants invading into the prior untapped natural habitats that have exposed and influenced the livelihood strategies of local communities.

The prevalence of illegal forest activities has greatly impacted on the government's efforts to achieve sustainable forest management in Cambodia. The rural people who are engage in these illegal activities are driven by poverty or lack of necessary knowledge on side effects that may result in over-harvesting forest products and wildlife poaching which will ultimately result in rapid deforestation and forest degradation. If the damage to the forest biodiversity are too severe, it may be hard to reverse the effect of degradation resulting from these violating activities. The constant loss of forest and wildlife would impact on the livelihood of rural communities who depend on harvesting forest timber products and non-timber forest products (NTFP) as their sources of income generation.

1.3. Significance and Objective Study

Many previous studies have focused on the robust interaction between rural community's participation and self-governance to improve local livelihood, sustainability of resources utilization and conservation through the decentralization of tenure rights and management power within the community in Cambodia. However, there is a lack of study of the role of community's participation in forest governance. The community's participation in forest governance is important in resolving the forest management issues such as the

increasing awareness of the importance of forest resources, empowering community stewardship over forest resources, collaboration with government to protect and preserve forest resources for long term use and sustainability. Hence, this research aims to extend the research perspective by integrating the consideration of the importance of community participation in Cambodia's forest governance. The objectives of this study are:

- To identify the role of rural community in forest governance.
- To identify the key factors that enhance the performance of community's participation.
- To identify the rural community's perception of sustainable forest governance.
- To identify the challenges that rural community face in participation in forest governance.
- To provide recommendation to improve the role of rural community in forest governance in Cambodia.

1.4. Research Questions and Hypothesis

1.4.1. Research Question

The main research question of this study is:

How can we control the uncontrollable resources due to geographical distances?

In order to answer the research question, we will focus on understanding sub-questions as followed:

1. What are the roles of rural community in forest governance?
2. What are the factors that enhance the performance of community's participation?
3. What is the perception of rural community in forest governance?
4. What are the challenges that rural community face in participation in forest governance?
5. What are the recommendations to improve their participation in forest governance?

1.4.2. Hypothesis

The role of rural community in forest governance through a robust participation in organizing, mobilizing resource, planning, decision-making, implementing, monitoring and collaboration with local authority will ensure sustainable forest management in Cambodia.

1.5. Organization

This research study is categorized into five chapters. Chapter 1 brings upon the understanding on the background forest uses in Cambodia and ongoing forest issues affecting forest-dependent people. It also includes the significance of the research, research objectives, research questions and the structure of thesis organization.

Chapter 2 consists of literature reviews on the theoretical understanding on the definition of key concepts of the commons, forest governance, and the discuss the theory on how community should be organized.

Chapter 3 describe the overview of the country background, how forest users interact with forest resources and typology of community forestry in Cambodia.

Chapter 4 describes the methodology, research design, data collection and analyze technique use to collect primary and secondary data as well as analysis and interpretation of research findings.

Chapter 5 focuses on the case study in which it describes how people in the community participate in community forestry governance and management system.

Chapter 6 analyzes and interpret the research finding, assessing the challenge and discussion from the findings.

Chapter 7 concludes the finding of this research and provides recommendations as a response to the policy implementation results to better achieve forest governance through the enhancing the role of community's participation.

Chapter 2 Literature Review

2.1. Conceptual Theories of the Commons

The governing of resources has been the hot topic of scholarly debates for the last few decades especially over the management of forest resource. The Garrett Hardin's scholarly work on the common-pool resource^① has been widely recognized by other scholars for defining the problem of over-appropriation of forest resources. Hardin (1968) believed that we live in a finite world that can only support a finite population. If one person accesses resources, it will be subtracting to the other person. Individuals are prone to the perception of placing self-interest above all else, so they tend to try and maximize their potential enough to secure themselves before considering other individuals. Hence, it leads to the complication where individuals may compete over the utilization of resources without making effort to preserve but rather trying to expand their control over the resources to maximize their expected profits. This leads to problem that Hardin defines as "the tragedy of the commons" (Hardin, 1968). The problem with common-pool resources being that it is open-accessed and available to everyone, and thus anyone can access and appropriate resource units and gain property rights only to what they have harvested (Ostrom, Self-Governance and Forest Resources, 1999).

By nature, users of resources do not consider the preservation of resources for communal use, instead they seek to maximize their expected profits as much as possible. This competition would lead to an unsustainable way of access resources being that it cannot satisfy the need of all users. Hence, it would lead to the overharvesting of resources. If one user harness certain units of resources, these resources will not be available to other users momentarily or permanently according the type of resources. Resources such as forests, for example, takes time for it to grow maturely to be able to use or restore to its original conditions. If it is being overharvested in a large scale or

^① "refers to a wide range of resources such as irrigation systems, fisheries, rangelands and forests which are characterized by its nature of having no specific ownership to any particular group and open-accessed to all actors." (Hardin, 1968)

in an unsustainable way that damage the surrounding biodiversity, it would lead to severe deteriorated consequences on the land quality and threatening species to the point that it cannot be recovered no matter how much time is given. Without the effective measures to tackle such problems, overharvesting would result in the users to lose more than just resources but their means of generate income to sustain their livelihoods and threaten the life of those dwell within including human and wildlife.

Mancur Olson (2002) in his work on the logic of collective action also share the same view as Hardin. His theory implied that individual as user of resources are rational actor who will act rationally to achieve common goals for his group or community. This attitude is well recognized as the collective action for individuals as part of the group members. But he also challenged his own argument by pointing out that a rational actor may also pursue his own self-interest by not act accordingly to the group provided that the individual still continue to benefit as being part of group. This theory has been broadly recognized especially in the study of the common resources. In theory, the resource is widely accessible to all individuals to use or appropriate the resources for their self-interested because it is not possible to exclude them from the resources. This conceptual phenomenon is referred to as the “free-rider effects” where individual who does not make efforts to participate in collective action will still benefits from the resources due to inability to exclude them from the resources.

Both theories have played well in the Prisoner’s Dilemma theory originally framed by Merrill Flood and Melvin Dresher working at RAND in 1950. Albert W. Tucker formalized the game with prison sentence rewards and named it, "prisoner's dilemma"

“Let us call that number R . Since we have two players, the cooperative strategy for each player is to withdraw $R/2$ resource units. On the opposite, the non-cooperative strategy is for each actor to withdraw as much as they think they get a benefit from it. Therefore, the number for the non-cooperative strategy is $>R/2$. If both players choose the cooperation

strategy and limit their withdrawal to R/2 they obtain 10 units of benefit, but if both choose the non-cooperative strategy they both obtain zero benefit. If one of them chooses the cooperative way and the other the opposite, then the first one will obtain -1 units of benefit and the latter 11 units. Since the prisoner's dilemma is a non-cooperative game in which all players have complete information and where communication among the players is forbidden or irrelevant, both players choose, in their role as rational actors, their dominant strategy, which is to non-cooperate. If both non-cooperate, they obtaining zero benefit''

(Ostrom, Governing the Commons, 1990), (Meyer, 2013)

Figure 1: The Prisoner's Dilemma Concept

		Player 1	
		non-cooperate	cooperate
Player 2	non-cooperate	0 0	11 -1
	cooperate	-1 11	10 10

Adopted from (Meyer, 2013)

In summary, the three theories have well described the dilemma that individual faces when attempting to engage in joint efforts for collective benefits. If the individual continues to benefit from the resources without the need to participate in protecting or maintaining the resources, then they do not have incentive to attempt collective efforts for maintaining resources. Instead, it is better to defect and gain momentum over available resources.

Then why do we need individual participation in forest governance?

2.2. Importance of Participation

Brown (1999) suggested that rural community's participation is pivotal because the local community have already established their residential areas with or nearby the forest. Hence, it would be more cost-efficient to mobilized the existing manpower to help protect and preserve forests rather than bringing outsiders to govern the resources. In addition, he also emphasized the importance of livelihood and local community's practice since forest resources are the sources of livelihood for local community by providing forest timber and NTFPs as an important safety nets for their livelihood, while local community's cultural practice and their interests make them the most viable actors in conserving of biodiversity and ensuring sustainable forest management. Any policy implementation would directly impact the livelihood activities and strategies of local community has direct effect on the condition of the forest. The integration of local community in forest governance through community-based management could fit well with the wider development assistance strategies of the international community providing there is a system to ensure equity of access rights. The consideration of resources utilization and appropriation equally and fairly within the community based forest management could increase the effectiveness of forest governance and contribute to poverty alleviation and income distribution.

The inclusion of rural community's participation in forest governance is a rational approach since involving of local community in forest governance may help to tackle forest management issues of unregulated public services, illegal activities, deforestation and forest degradation. However, policy makers have to be selective in the mechanism of integrating their participation into the policy. Rural communities are not neutral actors instead they tend to have certain attributes that linked them to forest resources such as social interaction, cultural practice and livelihood dependencies. It is important that these attributes have been taken into consideration in order to enhance voluntary participation and ensure effectiveness of policy implementation. In the next section, we will discuss how community should be organized to bring encourage effectiveness of people's participation in the community.

2.3. Self-governance and tenure rights

Many literature review on the dilemma of common-pool resources management convinced that forest users were put in a position that they are trapped in dilemma of the commons and would try to find ways to organize in order to overcome these issues. When individual cannot find ways to secure resources alone, they would find other individuals who share similar situations to group together in order to compete with external threats. This organizing pattern usually involves individuals who share common interests over resources and has similar attributes on how they would access and use resources. The organizing groups may proceed to devise the rule over resources that they claim and restrict other from accessing resources except members of their group.

Some scholars also recommended different form of institutional organization to govern the exercise of natural resources usage ranging from private property ownership to government ownership, and to community control on resources (Ostrom, Self-Governance and Natural resources, 1999). The private property ownership over resources may be effective in increasing the competitiveness and stimulate economic growth. Private ownership means that resources would be exclusively available to specific individuals or group that are entitles to natural resources. It encourages individuals to manage resources and receive more benefits if they made more production. However, it cannot justify whether or not resources can be distributing to everyone. Individual may consider clearing forest areas or transforming forestland into agricultural land providing there is more benefit given. Despite so, there is a clear indication that such land management transformation is less appealing especially in the perspective of environmentalists and policy makers who prioritize the importance of biodiversity and natural forests conservation. By giving the ownership to the users with full discretion to manage and transform the land and its surrounding environment as they see fit would lead to the mass of land clearance, reformulation of plantation strategy to maximize own profits rather than cumulatively preserving the untapped natural state of the forest areas. They believed that the forest should be preserve in the natural conditions, while any manipulation would impact the quality of the forest.

Another recommendation is the government ownership and control as a tool to try and resolve the issues of resources management has also been proven to be rationale but less effective in practices. The issues occurred mostly in developing country where as governments have limited capacity and budget to implement policy to ensure the effectiveness of their policy. State-owned forests are targeted by new migrants or opportunity seekers who seek natural resources because of various reasons such as agriculture, rising price of land, and settlement opportunity. The lack of effective law enforcement mechanisms and inability to exclude outsiders from accessing state-owned forests are the main reasons leading to increasing activities of rural people encroaching forest land in order to harness natural resources seeing it as an opportunity to gain access to resources and to some extends own the land after certain period of control over it. Reclaiming the occupied lands has proven to be a very challenging task as it could lead conflict of interests and hostile confrontation between conflicting parties.

Lastly, self-governance community is a concept that local community are recognized by the government to exercise and manage natural resources while their rights have been protected from the intrusion of outsiders. This recommendation centers on the important role of local community as a drive for resource protection and preservation for long term harvesting. According to Ostrom (1999), self-governance can be a suitable solution to the problem of common-pool resources. If the community has given more discretion on how they can manage, operate and appropriate the resources they would likely devise their own rules to govern natural resources that are starting to deteriorate but not severely damaged. According to Ostrom (1999), community has to possess or be granted with a set of institutional principles in order to achieve self-governance:

Figure 2: Principles of self-governance community

Principle	Explanation
1. Clearly defined boundaries	Individuals rights to harvest resource units within clearly defined boundaries.
2. Congruence	Share benefits within rules that are related to local conditions.
3. Collective-choice arrangements	Individuals that are affected by operational rules can participate in modifying operational rules.
4. Monitoring	Monitors the conditions and user behavior are accountable to the users.
5. Graduated Sanctions	Users who violate the rules are accountable and subject to sanctions based on the degree of violation.
6. Conflict-resolution mechanisms	Users have access local arenas to resolve conflict among users or between users and officials.
7. Minimal recognition of rights to organize	The rights of users to devise their own institutions have been recognized by external government authorities.

Adopted from: (Ostrom, Self-Governance and Natural resources, 1999)

By integrating the management task to the community, it would generate the sense of responsibility to the community between the group of individuals who pursue common interests over resources. This practice could reduce the fear of losing the resources if all individuals follow the defined rules and regulation related to resource management and utilization imposed to the community without the threat of outsider's violation. Ostrom (1999) also suggests that these users must have their livelihood depends on the resources, a shared understanding of resources usage and effects on each other and trust between users for them to be willing to participate in the community. It is also important that new rules are applicable and community would benefit from it for them to be able to accept and comply to this arrangement otherwise people

would not participate seeing that they do not benefits from such arrangement. The concept of community integration in resolving the dilemma of natural resources has caught attention of many scholars and policy makers as we have seen the changing trend of tenure and forest governance reform.

2.4. Governance Theories

2.4.1. Governance

Governance revolves around the concept of the processes of governing. Improve governance needs the integration of cooperation between government and the people (Johnston). Governance focus on not only the direction of strategic aspects of governing but also who should be involved in the decision making. The governance could be as broad as the global space where the issues is exceeding the purview of individual government to community governance that includes activities at a local level where the organizing body may not assume a legal form or be a formally constituted governing board (Graham, Amos, & Plumptre, 2003).

Good governance is one of the key strategic aspect of inclusive management with participatory approach. According to Johnson, the good governance involves more than the power of the state or the strength of the political will. The rule of law, transparency and accountability are considered to be the outcomes of democratizing processes driven by the leadership and participation of interest groups that are effective when restricted by legitimate and effective institution. UNDP has defined five principles of good governance as followed:

Figure 3: Key Principles of UNDP Good Governance

Principles	Key Aspects
Legitimacy and Voice	<ul style="list-style-type: none"> - all men and women could express their voice in decision-making either directly or through legitimate intermediate institutions. - The decision is made for the best interests of the groups

Direction/leadership	<ul style="list-style-type: none"> - The broad and long-term perspective on good governance and human development based on the understanding of historical, cultural and social complexities in which that perspective is grounded
Performance	<ul style="list-style-type: none"> - Institutions and processes try to serve all stakeholders. - The result from collective action meet needs while making the best use of resources.
Accountability	<ul style="list-style-type: none"> - All decisions are accountable to the public. - The free flow of information that is accessible to those concerned with them to understand and monitor actions.
Fairness	<ul style="list-style-type: none"> - Equal opportunities to all. - Legal framework should be fair and enforceable.

Adopted from (Graham, Amos, & Plumtre, 2003)

2.4.2. Forest Governance

Forest governance is the extension of the concept of governance and the building block for sustainable forest management (Bodegom, Wigboldus, Blundell, Harwell, & Savenije, 2012). Forest governance describe the way people and organizations rule and regulate forest, how they allocate and secure access to resources, rights over resources, and benefit-sharing including planning, monitoring and control of their use, management, and conservation (Bodegom, Wigboldus, Blundell, Harwell, & Savenije, 2012). The concept derives from the understanding of governance from the monopoly state governance system over forest resources to co-management where all actors has role with specific responsibilities. The important principles of good forest governance often mentioned in relation to good governance include: participation, fairness, accountability, transparency, efficiency and effectiveness (Bodegom, Wigboldus, Blundell, Harwell, & Savenije, 2012).

The International Union of conservation of nature has determined four governance type of forest governance:

- State governance: state hold the authority, responsibility and accountability for managing, determine its conservation objective, develop and enforce its management plan.
- Shared governance: referred to as co-management, collaborative management, join management, or multi-stakeholder management. This model is based on institutional mechanisms and processed, either formally or informally, result in share authority and responsibility among several actors.
- Private governance: comprises under individual, NGO or corporate control and/or ownership over forests. The authority for managing, conserving and developing of the areas rests upon the landowners' decisions.
- Community-based forest governance: this model includes highly active participation of indigenous people and local communities in managing and responsible for the forest through various forms of customary or legal institutions and rules. The indigenous people or local communities possess an institutional arrangement to take decision, devising rule, manage resources, and monitor and evaluation the community management (Borrin-Feyerabend, et al., 2013).

Forest governance reforms in the mid-20th century are believed to derive from the widespread recognition of rights and benefits to rural community living in forest areas. Local grassroots involvement has become the core focus of environmental resource management, protection and conservation (Bullock & Hanna, 2012). Bluffstone (2015) believed that natural resource degradation results from poorly defined and enforce property rights which leads to overlapping rights between the state, traditional authorities and local communities. Three international trends were identified as driven factors shaping the reform that have emerge worldwide: The demand for recognition of indigenous peoples' rights to their identity and ancestral land, Increasing in

awareness of the importance of biodiversity conservation, and Decentralization and co-management over forest resource and forestland (Larson, Barry, Dahal, & Colfer, 2010).

The reforms are being driven and shaped from the bottom-up approach by local claims for tenure rights recognition, and the top-down approach by the government for the global concern over biodiversity conservation and the promotion of democratic decentralization (Larson, Baryy, Dahal, & Colfer, 2010). The process delimitation of community territories are based on traditional livelihoods, resources utilization, and customary practices (Larson, Barry, Dahal, & Colfer, 2010). The land use mapping encompasses not just the residential territories but also other territories that come from the ethnographic interpretation and geographic referencing based on people's accounts of their land areas and use. International NGOs play pivotal role in providing support for developing the tools and increasing participation in the complex and costly mapping process while rely on the legal procedure and technical norms such as land regularization, demarcation, elimination of third-party claims, titling and land registration. In Latin America, the Bolivian government is in the process of titling approximately 24 million hectares to 200,000 indigenous people; in Brazil, the government has recognized about 100 million hectares involving 500,000 million hectares and supports the exclusion rights; and in Nicaragua, roughly 2 million hectares of forestland have been claimed and demarcated by for indigenous people. Agrawal (2007) suggested that the expanding of decentralization of community forestry-based management demonstrate the recognition of the importance of rural community actors in forest governance to govern their resources more effectively. He also pointed out that the successful governance would require the combination of robust characteristics of the resource system, the user groups, the institutional arrangements and the external environment.

For the scope of this study, we will focus on the community-based forest governance and the impact of participation of indigenous people and local communities on community forests and its sustainability.

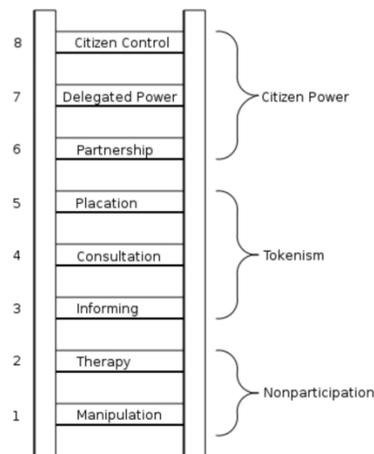
2.5. Participation theories

The participation of rural community is the key to achieve good forest governance. However, the degree and type of participation may have influence on the outcome of policy implementation. In this section, we discussed two participation theories: Arnstein “A Ladder of Citizen Participation” and Pimbert and Pretty’s model of participation.

2.5.1. A Ladder of Citizen Participation

Arnstein (A Ladder of Citizen Participation - Sherry R Arnstein, 2006) has highlighted 8 ladder level of citizen’s participation in policy as followed:

Figure 4: A Ladder of Citizen Participation



Source: (A Ladder of Citizen Participation - Sherry R Arnstein, 2006)

1. Manipulation and therapy participation: in this theory, individual does not participate voluntarily but rather participates under the influence of power-holders. It is considered non-participation where as citizens is told what to do without considering their feedbacks or motivation.
2. Informing participation: in this stage, the citizens are informed of their rights, responsibilities, and options available. It is considered the first step toward legitimate participation but the flow of information is just one channel, form government to citizen.
3. Consulting participation: the consulting participation invites citizens’ opinions about the policy consideration but citizens still

have not been fully recognized by government.

4. Placation participation: the citizens are allowed to advise on the policy or plan, but the power-holder retains the discretion in judgment and making decision.
5. Partnership participation: at this ladder level, the power redistributed through negotiation between citizen and power-holders where any decision- making are the result of share responsibility of both parties.
6. Delegated power participation: delegation of power allows citizens to be able to exercise their rights in decision- making authority and have genuine managerial powers.
7. Citizen control participation: citizens took control over decision making and control power over the policy.

To summarized, there are different ways that people could participate in policy implementation. The degree of participation may be various depends on the condition of how power-holder wants to involve people’s participation. But it is important to note the true participation of people was legitimately and slowly show in the last four type, while the first four represent an illusory type of participation.

2.5.2. Pimbert and Pretty’s Participation Theories

According to Pimbert and Pretty (1995), there seven typologies of participation namely: passive participation, participation in information giving, participation by consultation, participation for material incentives, functional participation, interactive participation and self-mobilization participation.

Figure 5: Typology of Participation

Typology	Components of Each Type
1. <i>Passive Participation</i>	People participate were told what is going to happen or has already happened. It is a one-way channel of information flow from top to bottom without any feedbacks is accepted from participants

<p>2. <i>Participation in Information Giving</i></p>	<p>People participate by answering questions posed by extractive researchers and project managers using questionnaire surveys or similar approaches. They do not have the power to make decision or influence on the policy as the discretion to decide on the policy remain with the top not with the people.</p>
<p>3. <i>Participation by Consultation</i></p>	<p>People participate are consulted for their opinions on the policy and feedbacks from the implementation of the policy by external agents. These external agents define both problems and solutions, and may modify the policy to try and solve respondents' problems. However, these consultation does not necessary mean that they would take into consideration of people's opinions or feedbacks.</p>
<p>4. <i>Participation for Material Incentives</i></p>	<p>People participate by providing resources, for example labor, in return for food, cash or other material incentives. They do not involve in the policy process or decision-making process. They also do not engage in prolonging activities when incentives end.</p>
<p>5. <i>Functional Participation</i></p>	<p>People participate by forming groups to meet predetermined objectives related to the project, which can involve the development or promotion of externally initiated social organization. Such involvement does not tend to be at early stages of project cycles or planning, but rather after major decisions have been made. These institutions tend to be dependent on external initiators and facilitators, but may become self-dependent.</p>
<p>6. <i>Interactive Participation</i></p>	<p>People participate actively in policy process which leads to formulating and devising action plan for the policy. It tends to involve interdisciplinary methodologies that seek multiple perspectives and make use of systematic and structured</p>

	learning processes. They take control over decision-making of the policy as well as maintain structures and practices.
7. <i>Self-Mobilization</i>	People participate by taking initiatives independent of external institutions to change systems. Such self-initiated mobilization and collective action may or may not challenge existing inequitable distributions of wealth and power.

Adopted from (Pimbert & Pretty, 1995)

This typology of participation was somewhat similar to the Arnstein's ladder of citizen participation. To start off, the passive participation implied a way channel of participation where participants act according to what has already decided. The participation degree changes accordingly from just providing information or consultation to investing own resources to forming a group to fulfill certain predetermined objective. However, the participation and interaction are rarely active at this stage. Only in the last two typologies proposed by Pimbert and Pretty (1995) that we have seen that participants have greater discretion in participating in decision-making. In this stage, participants seem to be very active in interacting with the other actors in steering the policy decision. Participants are independent of external institutions control and capable of devising their own management plan and mobilized resources as they see fit. By observing, Pimbert and Pretty's model of participation, we can find the similarity to Arnstein's ladder of citizen participation that active participation occurs when they take part in the decision-making process.

Chapter 3 Country Overview

3.1. Overview

3.1.1. Demographic and socio-economic profile

Cambodia is located in Southeast Asia and has the total areas of 181,035km² bordered with Thailand, Vietnam, Laos and part of Thai gulf. In 2015, the total population of Cambodia is roughly 15 million with the annual growth rate of 1.6% (World Bank, 2016) and the annual GDP growth of 7.5% in the last five years (World Bank, 2016). The remarkable progression of Cambodia socio-economic performance of reduce poverty rate from 38.5% in 2008 to 20.8% in 2015 (World Bank, 2016).

Roughly 80% of the total population are living in rural areas. The majority of Cambodia's rural population are subsistence farmer with rice crop as the main crop for cultivation. 75% of these people depend on access to forest and natural resources for essential products, energy and food (Forestry Administration, 2010). The rural people and forest-dependent people have been identifying to be vulnerable stakeholders that would be affected by the variation of policy implementation, land use planning, and intrusion from outsiders.

3.1.2. Forestry sector profile

Cambodia has the forest cover over approximately 10 million hectares with equivalence to 60% of Cambodia's total land areas including evergreen forest 20.49%, semi-evergreen forest 8.01%, deciduous forest 26.62% and other forest 6.3%. Forests play pivotal roles in the environmental and forestry sector as it is believed that sustainable forest management would contribute to the global effort to tackle climate change issues as well as preventing natural disasters such as flood, landslide, land erosion, drought, storm and other natural disasters. It is also the primary resources that sustain the livelihood of the rural people, minority, and indigenous people dwelled near and within the forest areas.

Figure 6 : Forest cover change 2002, 2006, and 2010

No.	FOREST TYPE	FOREST COVER					
		2002		2006		2010	
		ha	%	ha	%	ha	%
1	Evergreen forest	3,720,493	20.49	3,668,902	20.20	3,499,185	19.27
2	Semi-evergreen forest	1,455,183	8.01	1,362,638	7.50	1,274,789	7.02
3	Deciduous forest	4,833,887	26.62	4,692,098	25.84	4,481,214	24.68
4	Other forest	1,094,728	6.03	1,007,143	5.55	1,108,600	6.10
	Total Forestland	11,104,291	61.15	10,730,781	59.09	10,363,788	57.07
5	Non-forest	7,056,383	38.85	7,429,893	40.91	7,796,886	42.93
	TOTAL AREA	18,160,674	100	18,160,674	100	18,160,674	100

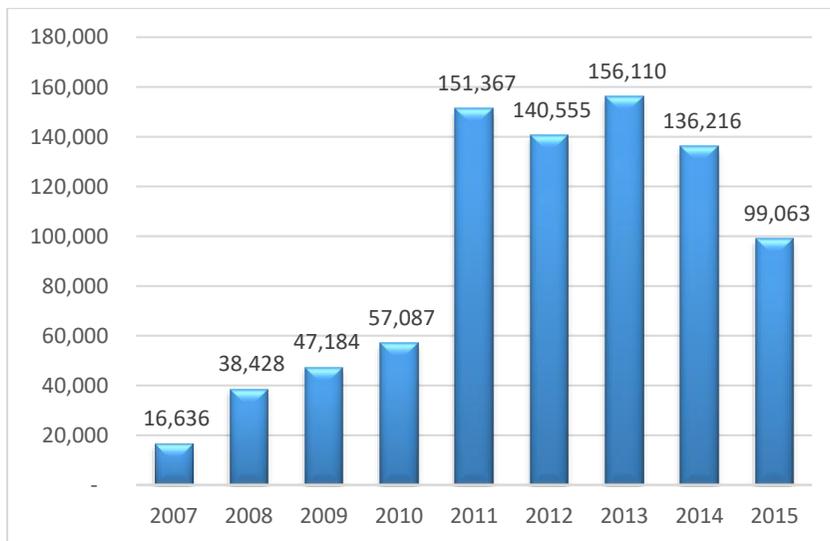
Source: (Forestry Administration, 2015)

The forest resources have played important part in contribution of the local communities in their daily livelihood by using forest products to sustain their day to day lives, providing foods, shelters as well as help generating income to support their livelihood. Most of local communities living within the forest have accustomed to the practice of harvesting forest timber and non-timber forest products (NTFP) due to their traditional practices that were passed down from generation to generation and the nature of its open access. Thanks to the convenience of geographical conditions of the nations, the natural resources would replenish and grow remarkably well if the given conditions is applicable even after being harvest by forest users most notably both forest timber products and non-timber forest products.

Cambodia's forests do not only consist of rich biodiversity and wildlife resources but also high value timber products as well. By laws, the high value timbers are defined and classified depends on their natural composition that makes them valuable for commercial. There are a wide variety of species of high value timbers such as rosewood, tulipwood, Thnong, Sokram and so on. The government makes use of these production forests by trading locally and exports these high value timbers to the international market in the form of square wood, rectangular wood, veneer, plywood for factory processing, furniture and so on. Timber products are usually referred alternatively as hardwood, and are prefer by most Cambodian people because it is durable, and to some extends, it is a symbol of prestige based on the type of quality of those hardwoods. Cambodian forest resources have large potential for supplying

forest timbers due to its diverse biodiversity and abundant species of hardwood distribute in many major forest areas ranging from evergreen forests to deciduous forests. Forest timbers has been the important resources that RGC has taken into consideration for contributing to economic development due to its high potential. In fact, the forest production capacity has seen an increasing from 16,636 in 2007 to 143,456 in 2011 which were being exported internationally and used domestically.

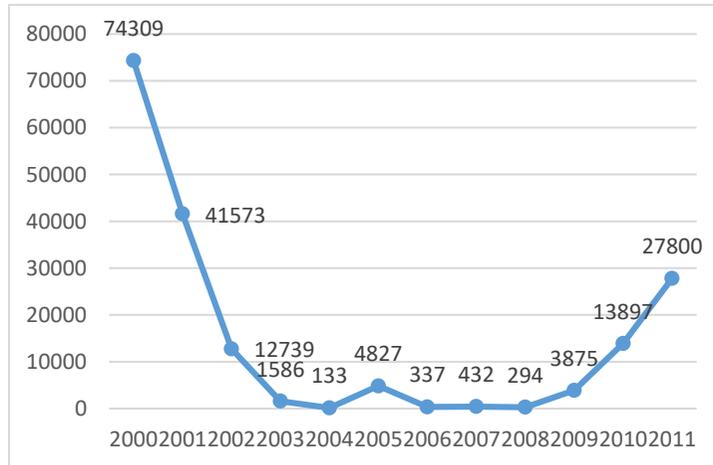
Figure 7 : Forest Timber Production, 2007-2015



Source: Department of Forestry and Community Forestry, 2015

However, despite being the country that have a lot of forest resources, the statistics shows that the trend of exporting has gradually decreased from 74,309 cubic meters in 2000 to 294 cubic meters in 2008, then the trend slowly rose back up since 2009 onward. The larger gap between production capacity and exporting production signified that the majority of forest productions are consumed domestically.

Figure 8 : Exported Forest Timber product, 2000-2011



Source: Forestry Statistics of Cambodia 2011 (Forestry Administration, 2012)

Aside from being the production forests for exporting, it also serves as the livelihood suppliers. The level of forest products contribution that contribute to domestic demands should not be underestimate. It is one of the most demanding items in Cambodia market especially when these products are declining rapidly due to over-appropriation by users to cope up with demands. Local people usually use various types of forest timbers for housing, construction, furniture and household tools to trade in order to generate income or using domestically as needed. In the residential construction line, wooden houses are still the most preferable type of construction for its flexibility and endurance to climate conditions and flooding.

In addition, forest also provides non-timber forest products (NTFP) for local consumption, trading to generate income and create other useful household equipment as well. NTFP refers to products other than timber products such as fuelwood, charcoal, wild fruits, mushroom, bamboo shoot, wild vegetables, rattan, and resin, just to name a few. NTFPs make significant contribution to livelihood strategies in Cambodia for domestic consumption and trading by rural people. NTFPs has lesser economic value compared to timber products but contribute greatly to daily livelihood of rural people as it can be easily collected and replenished seasonally provided that tree does not being cut down or there is no significant damage to the biodiversity area that lead to degradation of forest which may hinder the production of NTFPs.

3.2. Social, cultural and livelihood Interaction

The traditional management system of forest resources was mainly based on rural communities' customary practices with the lack of necessary legal instrument to regulate and govern their practices. The community was isolated from urban areas due to being located deep into forests and the lack of means to access the area. Hence, the management system was developed based on community cultural practices and mutual understanding of each other. The community establishes their management system by forming villages with village chief as head to oversee members' activities, resolve conflict and make decision in the name of community members. The community has the holistic views that they owned the forest and thus make use of available resources in their daily without any imposed rule to limit their activities.

Most of local communities living within the forest have accustomed to the practice of harvesting forest timbers and NTFPs due to their traditional practices that were passed down from generation to generation and the nature of its open access. Minority people especially at northeastern part of the country have practiced the shifting cultivation. The practices involve the clearance of certain plot of forestland and claim it as a place for crop cultivations for limited period of time (Swift & Cock, 2015). Users may use a variety of crop to cultivate but rice crop remains the most important species preferred by Cambodian. The secondary plantation may consist of species that are useful in sustaining livelihood such as banana, jackfruit, mango and so on. The area would be used for several years for cultivation before users discard it and move to claim another plot of areas leaving the previous one idle to allow the forest to reclaim the land after the crop yield declined (Swift & Cock, 2015).

The local believed that repetitive cultivation on the land over years causes the land to be less fertilized for the crop and degraded the land quality, so they have to change to the place that has better condition. In addition, the idling plot of land would have taken over nearby forest over the period, and this process would help restore the land fertility and prevent the degradation of land. Before clearing the plot of land or cut trees, users must perform a ritual involving praying and offering food as a sacrifice to dedicate to the forest spirit,

the protector of forest, to grant permission to cut trees and clear surrounding areas. This practice is important to the local people because they believe that violation of such act could lead to undesirable consequences.

Traditional livelihood strategies of rural community are highly dependent on forest products both forest timber and NTFPs. Timbers are the most valuable assets to rural people as they collected not only for subsistence consumption but also for trading as well. Community use forest timbers mostly for construction such as housing and ox cart, while NTFPs are subject to domestic consumption and possibly for trading. NTFPs has lesser economic value compared to timber products, but contributes greatly to daily livelihood of rural people as it can be easily collected and replenished seasonally provided that tree does not being cut down or there is no significant damage to the biodiversity area that lead to degradation of forest hindering the production of NTFPs. Another important example of NTFPs collecting is resin tapping. Resin is a liquid that is extracted from the trees grown in evergreen forest and deciduous forests specifically tree species like Dipterocarp trees (Swift & Cock, 2015). Resin tapping involve digging a hole in the trunk of the tree and lights a fire in the hole. The fire would heat up and stimulate the flow of resin liquid from within the trees. In some remote provinces, the forest products have contributed from between over 40% of household incomes and three-quarters of the household uses, with some areas accountable for 80% to 90% of household's income (McKenney, Chea, Tola, & Evans, 2004). There are also household demands for forest products such as fuelwood for cooking, wildlife for consumption, and NTFP for household materials for making torches, furniture, household tools and so on. The market demands of forest products may vary according to its geographical distances and ease of accessibility.

The establishment of infrastructure would enable a more robust transaction and trading of forest timbers and NTFPs between community and traders. The variety of forest products demand depends on the local consumption level and preference and whether it could justify the cost of transportation from outside of forest areas. Local people usually use various types of forest timbers for house construction, furniture, household tools to

trade in order to generate income or using domestically as needed. In the residential construction line, wooden houses are still the most preferable type of construction for its flexibility and endurance to climate conditions and flooding. In the nutshell, natural resources are the crucial part of rural community livelihood. Rural people are accustomed to harvesting forest products to contribute to their livelihood and income generation and thus feel that these natural resources is the natural property that is available for anyone to access without restriction. Forest provide resources for local community while community develop their own management system to ensure sustainable of forest to ensure their long-term benefits and access to resources.

Historically, Cambodian people have lived on close to the forest and rely on forest products for their livelihoods and forest landscapes in order to make sense of their social world (Swift & Cock, 2015). Hence forests serve more than just their shelters but the place with significant cultural practices associate with their everyday life. Rural people believed that the guardian spirits exist as protectors of forest and often associated with specific trees (usually big trees, or trees with distinctive feature that separate it from the rest) or places. Forests are believed to be the residing place of these divine spirits, and are locally identified as “Spirit Forest”. Geographically, spirit forests exist in various places in the forest attributes to the villages that identified them as spirit forests. These guardian spirits could be their ancestors that have passed away or old souls existed since before the settlement of the people. They believed that spirits own and protect the forest, so any violation without permission from the spirit could lead to bad luck or disaster to violators or villages that are associated with. If people wanted to access forest such as clearance of forest land, poaching wildlife or cut down forest in specific amount, they have to perform a ritual involving sacrificing food or livestock animal to the spirit to satisfy them and ask them to allow people to access their forest.

Spirit forests usually located nearby villages that associated with them. People would be prohibited from entering and cut trees within spirit forests believing any violating acts would lead to catastrophic consequences to the villages associated with loggers (Swift & Cock, 2015). This could mean the

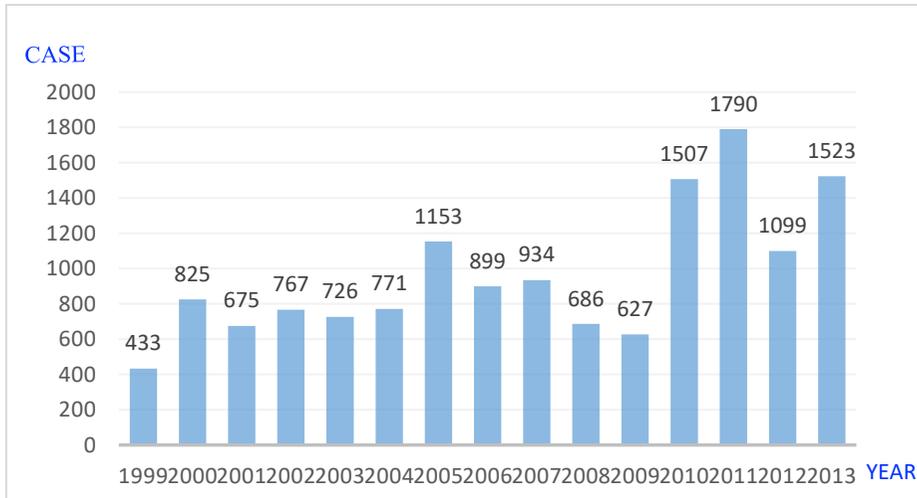
bringing of sickness, widespread diseases, and difficulties to the villages. Hence, the local people are very cautious in their actions and sensitive to outsiders who could potentially disturb the harmony practice of respecting the spirits. Despite an increasing logging activities in the forest by forest users causing the declination of spirit forests, they tend to be in better conditions compared to other forests (Swift & Cock, 2015). These believes has linked to behavior practices of rural people regarding how they manage the forest with high regard to the importance of the spirit. This is how those people make sense to the phenomenon happening around them regarding the mysteries of forest. how they encounter problem and solution to their daily life.

3.3. Forest Resources and Management Issues

The most challenging issues for RGC in forest management is the ongoing illegal activities of illegal logging, wildlife poaching, and forestland encroachment within the forest areas. This is because the forest land areas, despite being a state-owned property, have never been clearly demarcated combined with uncoordinated law enforcement and weak collaboration in forest governance between forest users and responsible authorities has escalated the issues to high level of national and international concerns. The high demand for lands and resources combine with an opportunity for tenure due to weak forest governance has stimulated the activities of encroachment, unsustainable shifting cultivation, forestland conversion, forest conflicts between users, and between users and government. Foreign investment in agriculture has expanded rapidly in recent years with the primary cash crop being rubber. Major road building programs are stimulating economic development and increasing opportunity costs of land but been criticized for inadequacy of social and environmental safeguards. Institutional jurisdictions currently lack clarity and policy measures in forestry have been weakly implemented in past years.

According to FA, the number of forest crime has seen a remarkable increase in the last decade with 433 cases in 1999 to 1523 cases in 2013.

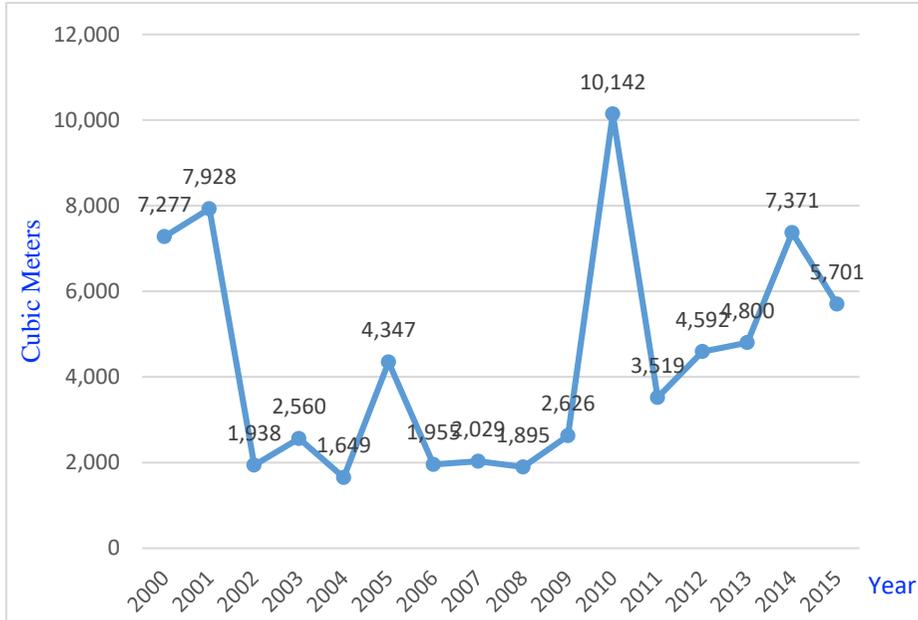
Figure 9: Record of Forest Offenses, 1999-2013



Source: Department of Legislation and Law Enforcement, FA, 2013

The major drivers of deforestation and forest degradation came directly from illegal logging, agricultural expansion, expansion of settlements, infrastructure development, forest fire, timber demand, wood fuel demand. Uncontrolled and illegal logging activities have resulted in widespread forest degradation in Cambodia. In recent years, industrial round wood production in Cambodia, which itself has very limited wood processing capacity, has increasingly supplied the region's wood product manufacturing center in Vietnam and China (McKean & Ostrom, 1995). The amount of timbers lost to illegal activities is rapidly increasing over the decade with some instance equal to or even exceed multiple time of the amount of timbers being exported abroad.

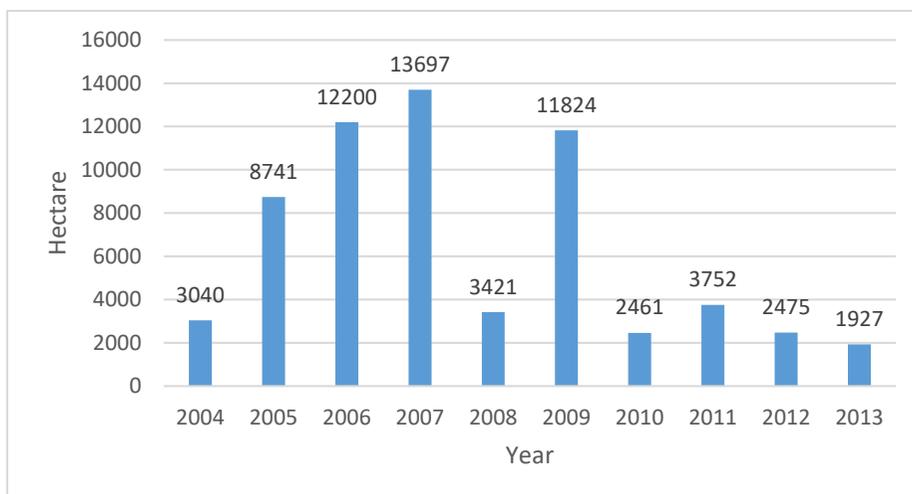
Figure 10: Record of Illegal Logged Timbers confiscated by FA



Source: Department of Legislation and Law Enforcement, FA, 2015

In addition, rural people who settle within the forest areas usually find themselves victims to the legal sanction due to the constant and repetitive engagement in illegal forest activities. To complicated things, there is also the ongoing forestland encroachment activities as well. It is one of the most complicated issues to tackle in the forest sector due to the nature of it being hard to enforce. Rural people intrude into forestlands and clear certain plots of land for the purpose of settlement, agricultural expansion and sometimes to demand for ownership to sell later on. These activities also commons to the forestland that government have licensed to investor for investment. Believing that the forest would be lost in vain, subsequently, rural people start to encroach and exploit as much resources as possible rather than leaving to those investors to exploit the resources.

Figure 11: Areas of Forest land encroachment activities



Source: Department of Legislation and Law Enforcement, FA, 2015

3.4. Community forestry model in Cambodia

Recognizing the strong relationship between users and natural resources, RGC have tried to integrate rural people participation into forest management planning through the implementation of community forestry. The logic of integrating local participation stems from the fact that Cambodian government are still lacking the necessary capacity to tackle the uncontrollable threat of rapid deforestation from the human activities. With the rapid growing of foreign investment, migration of newcomers who seek employment opportunity and ambiguity of land ownership has put local communities at the risk of losing the benefits of accessing natural resources if there is no effective mechanism to tackle such problems. Hence, the government has introduced the adoption of community forestry to help protect community while encouraging their participation in the forest management planning.

Community forestry is a concept of arrangement that represent the diversity of interest groups such as indigenous people, minority and rural people. Its definition varies from country to country based on the variety of arrangements. It is in general assumed the local involvement in forest resource management and planning that falls under many aliases such as community forestry, town or municipal forests, indigenous and aboriginal forestry, community-based conservation and co-management. (Bullock & Hanna, 2012).

In Cambodia, community forestry (CF) is defined as a community that voluntarily initiated to form a group under a community forest agreement in order to conduct development activities and use natural resources in a sustainable manner within a Community Forest in compliance with the provisions of the Forestry Law and Protected Areas Law. The main goal of community forestry is to encourage decentralization and participation of rural community in decision-making process in the utilization of forest resources that are significant to community for economic, social and ecological reasons. People engage directly in decision-making processes through their established community ranging from representative voting to represent local values and interest groups to advocate local control and benefits from their natural resources and land. Community forestry seeks to improve the diversity, quality and quantity of forest-derived benefits while enhancing local economic stability through forest-based economic development (Bullock & Hanna, 2012). The primary objectives of community forestry programs are:

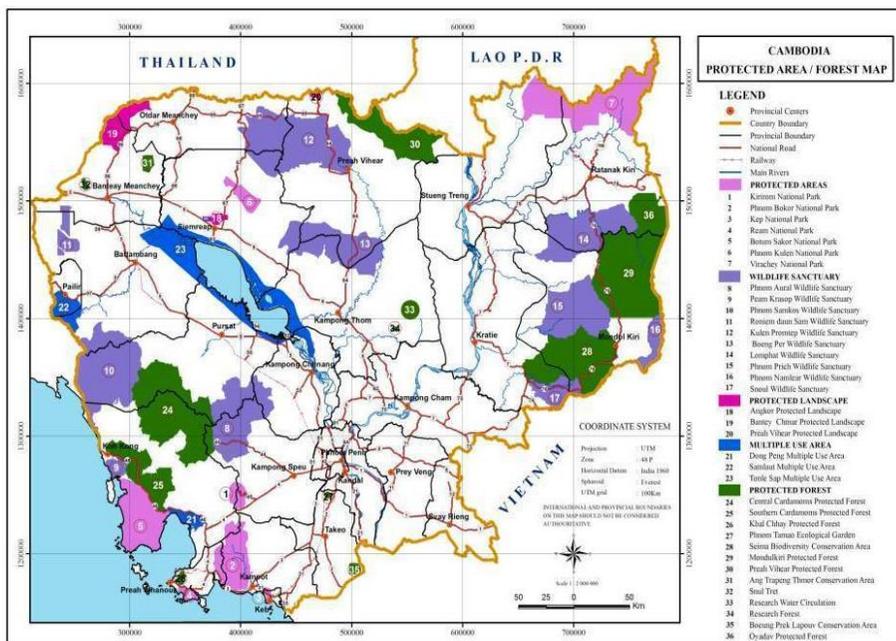
- Providing an opportunity for democratic and equitable use of natural resources.
- All forest-dependent villagers living in and near the forest is encourage to participate in CF establishment, management and development of potential CF areas.
- Promote SFM for both commercial and livelihood purposes with increased productivity, biodiversity conservation.

The notion of community forestry has been introduced to Cambodia during the 1990s and being official implemented in 2003 when RGC passed the law on management of community forestry and followed by other law and regulation to govern its implementation. The initiation of CF community is a response to an increasing rate of forest deforestation and degradation in Cambodia by bring about the concept of rural people participation in forest management plan for long-term sustainable forest management.

The establishment of forest areas in Cambodia was primarily initiated on the map-based demarcation of its boundaries. Hence, it has not been able to exclude or differentiate residential areas from the forest areas. Without clearly

defining boundaries within forest areas, it is almost impossible to eliminate illegal activities and conflict over forest resource and forestland due to expanding infrastructure development, investment in forest areas and the movement of migrants who seek employment opportunity and new settlement. Weak forest governance combines with inadequate capacity to cope up with the anarchical state of forest violation has escalated the forest intrusion and brought up national attention to try to find the way on how to tackle this challenge while protecting the rights of local community and prevent illegal activities from expanding as well as ensuring the long term sustainable forest management.

Figure 12: Land Use Map of Cambodia Forest Areas



Source: Department of Forestry and Community Forestry, Forestry Administration, 2013

The modalities of CF have the objective of managing the natural resources sustainably through the establishment of permanently demarcated CF boundaries and the land registered as state public land and as permanent forest estate. The purpose of community forestry is to establish a community legally recognized by RGC to manage, use, and benefit from natural resources in respect to their cultural and traditional practice and improve people's livelihoods while government retain ownership over the forest land. By law, the

community's action shall be governed and monitored by RGC's responsible agency, Forestry Administration and MoE. This initiative is a very important step not only to establish an organized network between government and community but also a pivotal step in attempting to legalize and protect these communities against intrusion and violation claims from outsider.

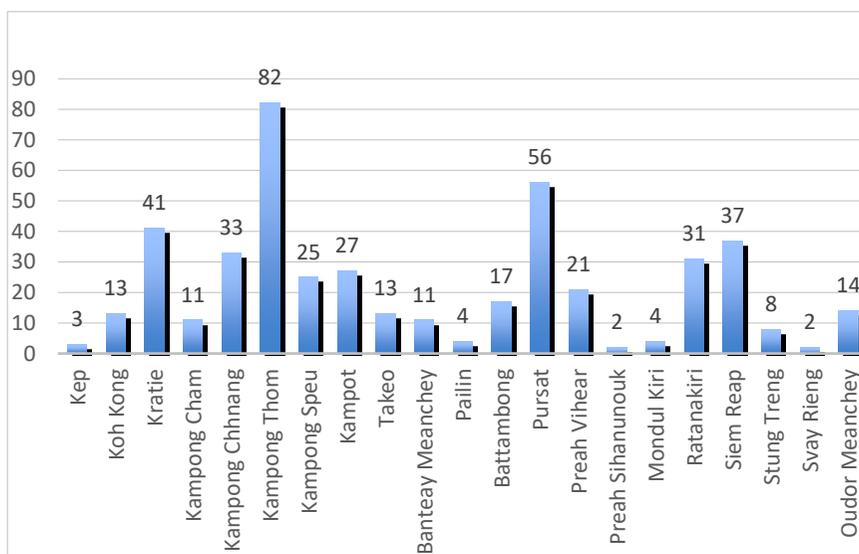
There are two branch of community forestry in Cambodia: the community forestry (CF) under the management of Forestry Administration, Ministry of Agriculture, Forestry and Fisheries and the community protected areas (CPA) under the management of Ministry of Environment. Both systems have share similar legal characteristics with the only different being the different uses of terminology and management organization.

3.4.1. Community forestry

As of 2016, the establishment of CF in Cambodia has proven a fruitful result with 455 CFs have been established within permanent forest estates and 133 CFs within protected areas. The large number of CF community are generally large in certain provinces that has major forest significant the Prey Lang forest, Cardamom mountains range and other significant evergreen forests popularly recognized for its rich biodiversity and abundant resources of extremely valuable natural resources both timbers products and NTFPs.

Overall, in the permanent forest estates, the community forestry arrangement has achieved a rapid increase in its number being from 264 CFs in 2007 to 455 CFs in 2013. This remarkable increase maybe explains by the government efforts and development partners in facilitating these establishments in order to ensure the legal binding protection for the community as well as help the community to have more discretion in accessing the natural resources in a sustainable way and thus improve community livelihood and preventing over-appropriation of natural resources. However, as of March 2013, there is only 246 CFs has signed agreement with government. It indicates that roughly less than half was able to actually complete the process of CFs community.

Figure 13: Establishment of Community Forestry by provinces



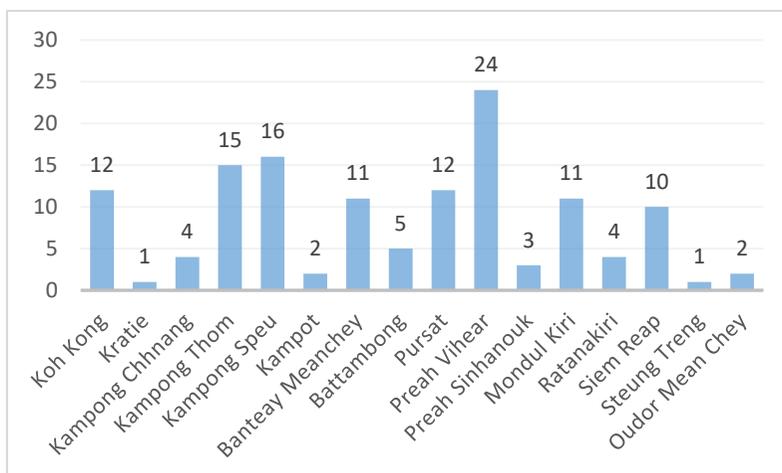
Source: Community Forestry Statistics (Forestry Administration, 2015)

3.4.2. Community protected areas

In protected Areas, there are 133 CFs have been established encompassing 31,141 households and 117,131 populations. Only 12 CFs are able to signed agreement with the government while other 21 is in progress and the rest have yet to initiated. The inability to sign agreement with government could hinder community to function systematically to utilized their rights over the resources, and in time, it would wary the commitment of rural people who still have not benefit from the system despite being recognized by RGC.

Some community does not function properly or does not function at all due to the lacks of financial support to help the community to establish it self-governance. Despite government efforts of community decentralization, many initiatives remain dependent on international organization and local NGOs technical and financial support to encourage participation of community's participation in CF initiatives such as awareness raising, law enforcement operations, reforestation and livelihood improvement programs within protected areas. Figure 14 shows that 12 of 133 CF in PAs are not functioning due to the lacks of funding.

Figure 14: Establishment of Community Protected Areas by provinces



Source: GDANCP, 2016

Figure 15: Summary of CF Status in PA

	CFMC	Demarcated Boundaries	CF By-laws	CFMP	CFA	Formal Recognition	Functioning
Yes	133	122	100	21	12	102	121
In Progress	0	9	9	24	22	1	0
No	0	2	24	88	111	30	12*

*Lack of Funding

Source: GDANCP, 2016

3.4.3. Registration and Formalization

The development of CFs is located within the permanent forest estate and protected areas. The permanent forest estate includes all forest types in Cambodia encompassing about 70% of the forest cover governing by the Forestry Administration (FA) under Ministry of Agriculture, Forestry and Fisheries. The remaining 30% classified as protected areas governing by the Ministry of Environment (MoE). The roles of government agencies in facilitating CF development process consist of:

- Assess and demarcate forest areas for establishing CF;
- Make decision to recognize, reject and terminate CF communities;
- Revise and approve community forest agreement with a CF community

through FA;

- Review and approve CFMP
- Monitor and evaluate the community forestry process
- Assist CF communities in conserving spirit forest and religious forest;
- Coordinate with government institutions and stakeholders on the establishment and implementation on CFAs;
- Facilitate the resolution of conflict upon request by a CF community;
- Establish and manage CF central registry and map of CFs;
- Provide technical support to CF communities;
- Promote training support to CF communities;
- Promote training to FA and CF communities to effectively implement CF activities and enforce RGC law and regulation in force;
- Provide any information and documentation related to CF activity at the request of a CF community;
- Enforce the implementation of law and regulation including CF regulations, CFMC by-laws, CFA and CFMP.

3.4.3.1. Registration Procedure

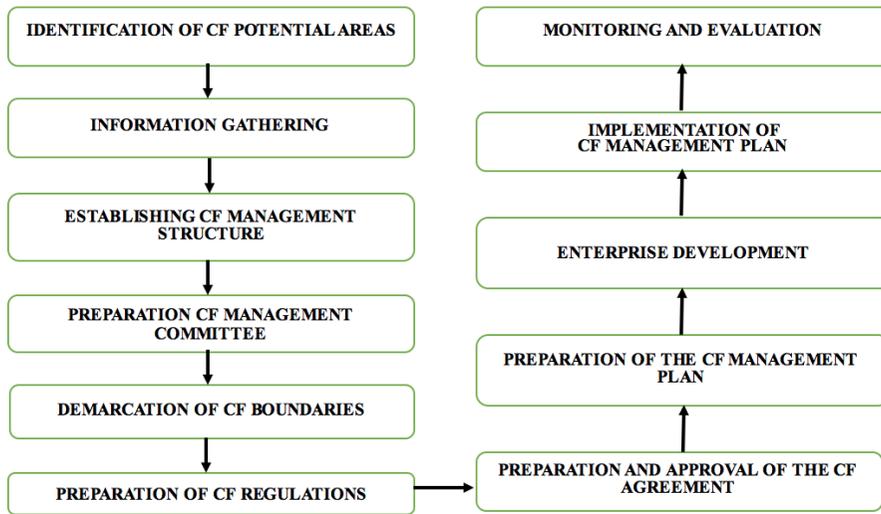
The community forestry can be initiated by the local community or the government agencies with 60% of the community household willing to participate in this initiative. The initiative has to be followed by a series of study and assessment conducted by FA on the potential of forest areas to be able to establish a CF community with the facilitation by local authorities or the commune council. The community then will have to establish a temporary election committee, the CF Management Committee (CFMC) who are elected by the community. Once CFMC is established, a formal request will be sent to MAFF for approval of establishing CF community. Once it is being ascertain that it is possible to establish a CF community, MAFF will give an approval to the community if the community have proven that they have adequate knowledge and willingness to abide by the Community Forest Agreement (CFA) (Forestry Administration, 2010).

Upon obtaining approval from MAFF, the community with the assistance from FA will proceed to demarcate the boundary of community forest with the involvement from local authorities, representatives from adjacent villages if applicable, and relevant stakeholders in order to avoid conflicts over boundary locations. The community will then also proceed to develop CF regulations, CF agreement and CFMP approved by CFMC and recognized by local authorities with the participation of community members. CF Regulation outline the tenure rights, benefit sharing, role and responsibilities of community members as well as conflict mechanism between members. CF agreement outline the role and responsibilities of CFMC in accessing the resources, while CFMP outlining detail planning of how communities will utilize the resources within mandate of agreement.

This multiple steps of arrangement may involve community participation, training, data collection, analysis and mapping with technical assistance of FA and relevant stakeholders. CF community that have been officially recognized by MAFF must sign a CF Agreement (CFA) to be able to fully taking advantage of allocated rights from RGC to harvest and manage natural resources within the vicinity of CF demarcated territory. CF agreement between RGC and CF community. CF community has a mandate of 15 years and can be extended every 15 years.

CF community may exercise allocated rights freely with respect to the CFMP. CF community is obliged to report regularly to the local FA about the progression and operation of CF community based on the agreed provision in CFA. Although RGC has given discretion to CF community in managing community forests, RGC retain ownership over the forestland and natural resources, and thus may monitor CF activities or cancel CF agreement at any time should the community violate any provision stated in CFA (Forestry Administration, 2010). The establishment of CF within PA also follows the similar procedure with the exception that MoE is the agency that interacts with communities.

Figure 16: Describing CF Establishment Process



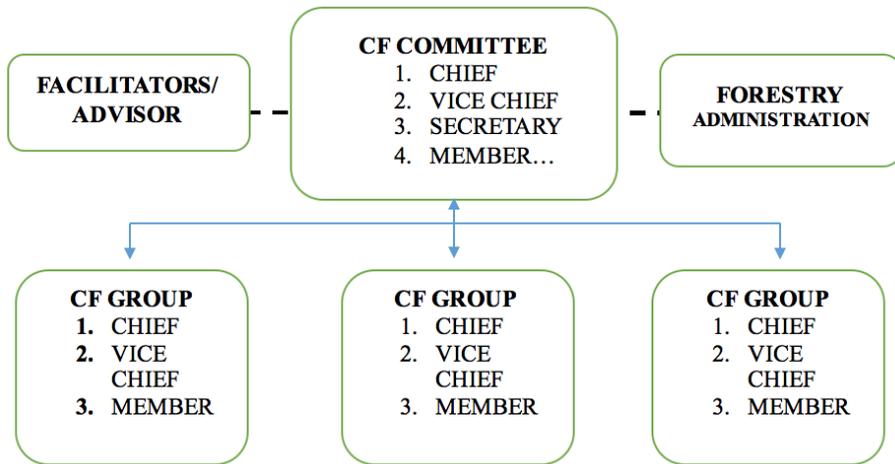
Source: (Forestry Administration, 2010)

3.4.3.2. CF Governing institution

Each CF is led by the Community Forestry Management Committee (CFMC) who are elected through a secret ballot by at least two thirds of the members of the CF community. CFMC have board members between five to eleven members depends on the requirement and the scale of community itself.

CFMC is a leading committee who represent the whole community in communicating, facilitating, and negotiating term and conditions to be applied to the community with responsible agency, local authorities and relevant stakeholders. CF community will also be classified into smaller group, CF group, which consists of ten to twenty-five households under the supervision of respective CF group’s chief and vice-chief who are assigned by CFMC.

Figure 17: Structure of CFMC



Source: (Forestry Administration, 2010)

Chapter 4 Research Methodology

4.1. Methodology

In this study, the researcher will use a qualitative analysis approach and logical reasoning as the main focus on this research. The study has chosen Chambok Community Protected Areas as a study site to examine the role of rural community's participation in the robust system of forest governance within the ecological environment of the Kirrirom National Park in Cambodia. The study also used SWOT analysis to identify Chambok community's strength and weakness as well as the broader opportunities and threats that the community faces. SWOT stands for Strength, Weakness, Opportunity and Threat. The method was developed for business institutions as an assessment tool for exploring possibilities and solutions to problems, determining changes and challenges based on the strength and weakness of the institution and making decisions about the best path for the initiatives (Renault, 2016).

4.2. Research design

The research design of this study consists of two methods: the survey through open-ended questionnaires, and interview with key informants.

4.2.1. Key Informants' Interviews

The survey was conducted to evaluate the relationship between forest-dependent people and how they manage the resources, the effectiveness of CF adoption policy and their perspective on CF implementation. To understand the community management system and how community members participate in CF management system, the researcher has conducted various literature reviews and interviews with three key informants (CF committee chief, National Park Manager, and representative from supporting NGOs) to gain a holistic view surrounding the implementation of CF management in the community. The interviews were conducted with the help of close colleagues who helped arrange the interview with all key informants on October 25th, 2016.

The interview was conducted via phone interview with the chief of Chambok CFMC to obtain general information, understanding how the community

self-governance themselves, and how they operate within the ranges of community forestry. Some additional necessary information and confirmation of missing information were accessed and obtained by telephone interview and informal discussion with colleagues who has experience working on the studied sites as well as their valuable experience as high level leaders who have engage in decades regarding the community development and facilitation to empower community participation into forest management plan.

4.2.2. Survey Questionnaires

The survey was conducted to collect primary data through open-ended questionnaires. The questionnaires were arranged in an unstructured and without complexity of responding to the question to ensure the flow of responding and information from respondents. The logic of selection being that the majority of local people possess limited capacity to read and write. Researcher predicted that critical question design could intimidate their participation in the survey. The form of survey questionnaires is attached in the appendix.

100 households of community members were targeted for the survey with the selection of one member per household randomly, but only 39 participants have volunteered to participate in answering the questionnaires. The questionnaires consist of 20 questions that can be categorized into four categories:

Personal Information/ Recommendation	Dependency on forest resources	Public Trust and Interaction	Participation in CF Governance and Management
Q1/Q20	Q2, Q4, Q5	Q3, Q10, Q11, Q12, Q13, Q15, Q17, Q18, Q19	Q3, Q10, Q11, Q12, Q13, Q15, Q17, Q18

The open-ended question in this survey provide opportunity to understand the dependency of community people as well evaluate the interaction of CF members with park ranger who are in charge of protecting

protected areas, local authority and relevant stakeholders and NGOs.

The purpose of this survey is to:

- Identify their dependency on forest resources.
- Understanding of the community forestry based management through identifying purpose CF, process of CF establishment and their rights as CF members.
- Identify respondents' perception forest conditions, cooperation between CF members, between CF members and local authority, and between CF members and park ranger^②.
- Identify their performance in participation through collaborative code of conduct in law enforcement of illegal activities,
- Identify challenges and advantages of CF development.
- Identify attitude change through the perception of respondent.

4.3. Data collection

The research design is mixture of various technique to collect primary data and secondary data to analyze and interpretation of the research finding. The preliminary research on the study sites was conducted in August 2016 through the review of literature, project report, journals, organizational report and phone interviews with senior and high level government official who is in charge of policy making of forest governance policy in protected areas, director level government official as managers of Kirrirom National Park and leaders of Chambok CPA to understand the general background of the studied sites.

The survey research on the community was conducted in early October 2016 with the support of senior government officials working in Kirrirom National Park, CFMC members, and the long-standing partner who help community to engage in a robust community-based forest management through eco-tourism, Mlup Baitong NGOs. Due to the distance and cost-related

^② Park Ranger: is a specialized government staff in charge of protecting and monitoring all activities within and nearby protected areas. They are also entitling to the rights of engaging in cracking down illegal activities or any attempt that violate protected areas.

issues, the survey was conducted through former colleagues, whom researcher used to work with during the time working at MoE, who has volunteered to help collect primary data with the community members.

The respondents (N=39) that join the survey are consisted of four age groups:

Figure 18: Age of Respondent

Age	Gender		Number	Percentage
	Male	Female		
20-30	12	3	15	38.5
30-40	11	3	14	35.9
40-50	3	2	5	12.8
50-60	4	1	5	12.8
	20	9	39	100

In addition, the majority of respondents are reported to be married. The reason being that the rural tradition allows people to get married as early as 16 years old and have low divorce rate.

The data collection, however, have encountered some identifiable problem that limits the ability of data collection as follows:

- Some respondents are not willing to participate in the survey due to their personal reasons such as “busy with daily activities”, “having no interest in participating”, and the limited ability to read and write.
- The local authorities were reluctant to facilitate in data collection due to political reason and administration reason. The political reason was related to the upcoming commune election in 2017 in which some activities could stir up “unnecessary problems” as forest management is a very sensitive issue in Cambodia and disturb “the integrity of regional stability” within their jurisdiction. The administration reason associate with official paperwork

authorization letter from responsible institution. Hence, the survey was primarily conducted based on voluntarily basis of respondent participation

- The volunteered colleagues have limited time and resources to mobilize in survey data collection

Due to these limitation, some of the analysis of information and interpretation the finding was based on phone interviews and informal discussion with key informants who are member of Chambok CPA, PA manager level government officials, and PA policy maker level government officials.

4.4. Analysis technique

The research uses the descriptive analysis as the foundation for analyzing primary data and interpretation of research finding. Simple descriptive statistics were conducted to analyze the data and using the result of interview and informal discussion with key informants to find the practical outcome of community performance's in forest governance as well as the attitude and perspective change of local community on the forest governance policy. The researcher used "Google Form" to generate online questionnaires to facilitate the difficulty in transferring raw data due to geographical distances and time limitation. The analysis use of data was done by the assist of online analytical tools provided by google, and Microsoft Excel and Microsoft Words to generate figures and tables.

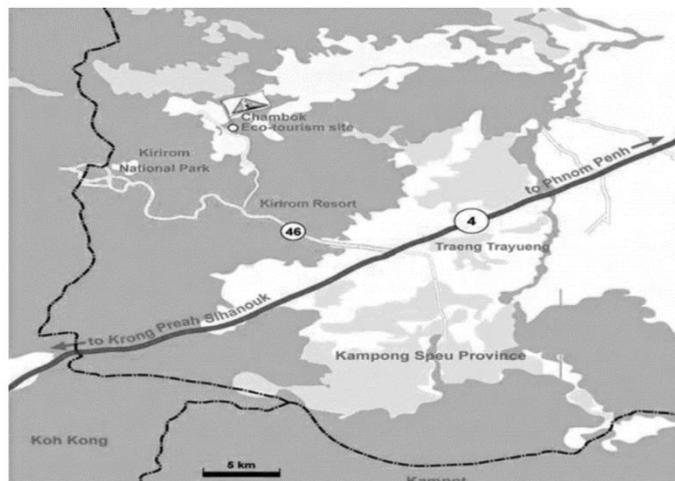
4.5. Study Site

In order to fulfil research objectives, researcher has conducted a case study in Chambok community, one of the community protected areas within Kirrirom National Park, protected areas. The study examined the role of rural community participation in Chambok Community Protected Areas in the robust sustainable forest governance within the ecological environment of the Kirrirom National Park in Cambodia. Researcher selected Chambok community as a case study due to the community's strong ability of self-governance and collaboration with local government.

Chambok community is located on the border of Kirrirom National Park approximately two hours from the capital city, Phnom Penh. The CF was established in 2002 with 1,391 hectares of forestland. The people living in the CF consists of 6 villages with 356 households and total population of 1,889. CF members are mostly farmers with smallholdings, growing rice and vegetable. 94% of the populations are involved in forest resources extraction activities (Chhinh & Kong, 2013). The types of forest resource that are commonly access by local includes bamboo, mushroom, fuelwood and poles, rattan, and timber for construction. People depend on forest resources via harvesting forest resources to sustain their livelihood and provide forest service such as eco-tourism and trading of forest resources.

In 2001, Chambok community have received support from local NGO, Mlub Baitong in cooperation with MoE to establish eco-tourism service in order to encourage participation in protecting community forest and boost local livelihood, the community has adopted a community-based ecotourism of Chambok waterfall in which they turn an environmental friendly natural landscape to the tourist site.

Figure 19: Map of Chambok Eco-Tourism Site

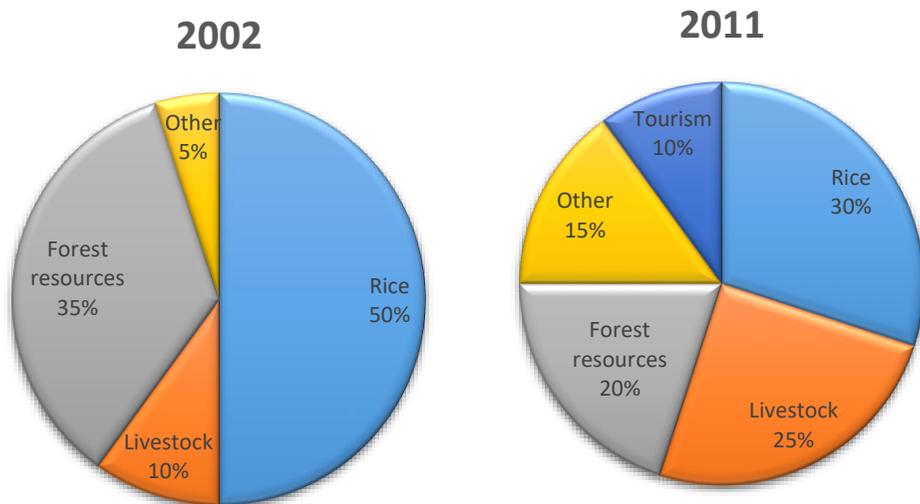


Source: (Va, Lay, & Chhum)

This have done with the support from many stakeholders including Mlup Baitong NGOs, protected areas agents and local authority to provide funding, technical and legal assistance to the arrangement. The advantages of

this development are the reduction of livelihood dependency on forest resources through other alternative such as eco-tourism. This has significantly help community to expand the opportunity of generating additional incomes. Before the adoption of CF arrangement, the community has livelihood depended heavily on the agriculture and the forest resource as their source of income with 50% and 35% respectively but after the adoption, the changes in livelihood strategies shows that there has been a decrease in dependency on forest resources to 20% and agriculture to 30%. People depend on forest resources via harvesting forest resources to sustain their livelihood and provide forest service such as eco-tourism and trading of forest resources.

Figure 20: Comparison of Community Incomes Sources



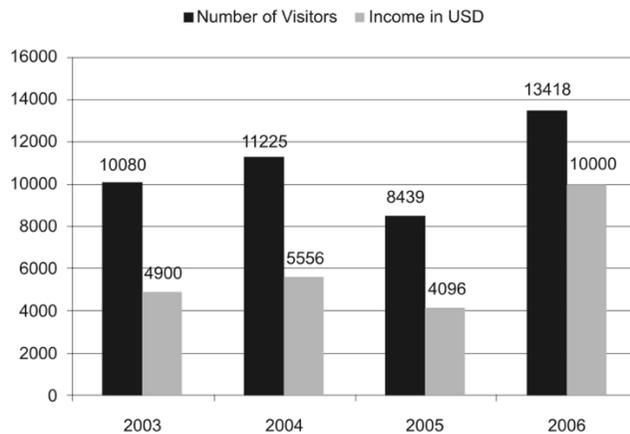
Source: Mlup Baitong’s Staff interview

An interview with Mlup Baitong’s staff (personal communication, October 25, 2016) showed that before the adoption of CF arrangement, the community has livelihood depended heavily on the agriculture and the forest resource as their source of income with 50% and 35% respectively but after the adoption, the changes in livelihood strategies shows that there has been a decrease in dependency on forest resources to 20% and agriculture to 30%^③.

^③ Figure 20

The establishment of eco-tourism has assisted in transforming the local community to improve their self-governance, obtain improve livelihood, create job opportunity, and income generation. According to Va (Va, Lay, & Chhum), the eco-tourism service from natural waterfall has attracted thousands of tourists from 10,080 in 2003 to 13,418 in 2006 with annual income contribution of 4,900 USD to 10,000 USD respectively.

Figure 21: The Number of Visitors and Income Generation



Source: (Va, Lay, & Chhum)

Chapter 5 People's Participation in CF Governance and Management

5.1. CF Operation and Management

The operation management of CF consists of the overall processes for management such as organization of CF, formation of leading committee, role and responsibilities of CF committee and CF members, and financial management.

5.1.1. Organization and Membership

The Chambok CPA was formally registered as community protected areca in Kirrirom National Park in 2002 for forest protection, natural resources conservation, resources utilization and management by local communities. According to the interview with key informants, the community is managed by an institution called “Chambok Community Protected Areas Committee”. The committee is led by one chief, two vice-chief and twelve people as members of committee. The committee members were elected through an election by the voting over 60% of CF members. One chief and two vice chiefs were selected as leaders of the community committee with two people from each village as representatives in the committee. The prerequisite requirement of committee members includes:

- Individuals shall volunteer to be candidate for election as committee members;
- Individuals shall commit to the preservation and protection of forest and natural resources;
- Be educated, can read and write Cambodian language;
- No discrimination or any political tendency
- Individuals shall not have any criminal record
- Individuals shall not engage in any illegal activities
- Individuals shall possess leadership skills recognized by CF members.

The member of CF are local people who have been living and depending on the forest resources of the community territory since before the establishment of the CF. Their participations in the CF are very important as the law stipulates that CF arrangement needs to have support and agreement from local community with the proportion of at least 60%. The requirements of CF members include:

- Being the local in the community;
- Have Cambodian nationality and be at legal age of 18;
- Interested to participate in collective action to utilize forest and natural resources sustainably;
- One person can only be entitling to one CF arrangement.

In addition, the community could also recruit new member who has moved in or married with local people. The recruited members could exercise their rights the same as community members provided that they have proven that they abided by the rule and regulations of good practice within the community and have been living within the community at least two years. The membership of CF members will be awarded to individuals during the CF general assembly provided that there is no objection from other CF members or any report of individuals' misbehaving such as violating community rules and regulations or engagement in illegal forest activities.

5.1.2. Duties and Responsibilities

CF committee play an important role and responsibilities in leading and governing CF community to ensure transparency, accountability and equity within the community as well as coordinating and facilitating with local authorities, protected areas' park rangers, NGOs and other relevant stakeholders. The roles and responsibilities of CF committee consists of:

- Prepare and adopt CF regulation for the CF community with participation form CF members and facilitation from local authorities;
- Prepare a draft of CFA with technical assistance from local authority;
- Operate in accordance with terms and conditions of CF regulation, law

and other relevant regulation;

- Open a bank account and manage CF community finances in a transparent and accountable manner and with responsibility;
- Make decisions on CF development with the participation of the majority of CF community members in compliance with the CF regulations, CFA and CFMP
- Participate in the consultation to prepare regulations related to or benefiting CF community members;
- Report and inform immediately about any forestry offense occurring within a community forest area to the nearest local authority;
- Conserve and protect wildlife within community forests (RGC, 2003).

In addition, CF members are the core of community's performance in achieving its goals of good forest governance and sustainable forest management. Their participations in CF implementation would enable the community to effectively implement policy and contribute to the efforts of forest and natural resources conservation and protection while also improve local livelihood through collective actions. CF members also granted a wide range of rights and responsibilities includes:

- Participate in election to choose CF committee members;
- exercise rights to tradition practice of access and withdrawal of forest resources;
- Participate in decision-making and benefit sharing from the usage of community forests;
- Participate in monitoring the access of community forests by non-CF members or outsiders;
- Participate in law enforcement by reporting violation activities occurring within community forestry.
- Participate in preparing and implementing CF by-laws, CF management plan and CF agreement between community and government;
- Abide by the law and regulations governing the protected areas;

- Protecting and conserve forest and natural resources;
- Follow the guideline for harvesting and withdrawal resources;
- Do not engage in illegal activities or any violation that are entitled to punishment in accordance to law and regulation currently in force.

5.2. Participation in Decision-making

In the conversation with CF committee's chief (personal communication, October 25th, 2016), CF members participate in decision-making during their community meeting. The community holds regular meeting with CF members to report about CF performance, deciding on management and financial planning, or resolving any conflict issues or contention between CF members. There are two type of meeting conducted regularly: the monthly meeting and the annual general assembly.

The monthly meeting usually conducted at the end of each month with the participation CF's committee members and some CF members who wish to participate in order to voice their concerns, express their opinions on the activities of CF or curious about the progression of CF management plan implementation. According to the interviews, the monthly meeting involves reporting on the CF's activities, assessing the performance, making decision on CF management planning and involves action plan, and resolve any possible problems that exists. The result of the meeting will be conveyed to the CF members through their representatives to ensure that all CF members have been informed of the committee's decisions and understand the management policy.

“The community members are willing to participate in the CF general assembly because they are curious on understanding the community planning, result of the annual implementation, and how committee utilize community funds for the communal benefits. We do not need to compel them to participate because they have already understood their rights and encouraged to express their voices in governance and management of their CF”.

CF committee chief

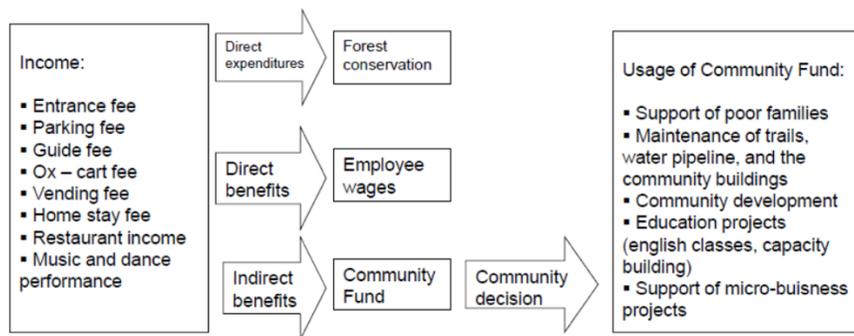
(personal communication, October 25th, 2016)

The general assembly is an annual meeting between CF committee and CF members with the participation of local authorities including representatives from commune council, protected area's rangers and representatives from supporting NGOs. The general assembly usually takes place at the end of each year with the requirement of at least 60% of CF members to participate in the event. During the meeting, the committee would report the result of CF management plan implementation, explain on how community fund is distributed and use, and deciding on CF management plan and financial allocation for community development plan for the following year. During this time, CF members will be asking to select and vote on the priority areas of development and financial allocation within the community.

5.3. Participation and Benefit-sharing

The community has established benefit-sharing system within the community between CF members who participate in providing environmental service to tourists who have come to visit the community. Figure 19 illustrated the direct benefit that community obtains from the environmental service they provide.

Figure 22: Benefit Sharing System in Chambok CPA



Source: (Meyer, 2013)

The other indirect benefits that other CF members within the community has benefits from the projected are: trading of NTFPs to tourists, improve infrastructure, development of livelihood, water access and so on. In addition, the community also have the community fund in which certain share

of income that generate from community's environmental service will allocated for communal uses. Community fund will be used to support other activities, livelihood assistance and infrastructure development of the community such as:

- Support poor families;
- Maintenance of trails, water pipelines, and the community buildings;
- Community development and education projects;
- Support of micro-business projects and so on (Meyer, 2013).

5.4. Participation in Protection Management

This section focuses on how CF members' participation in collective action of resource withdrawal, collaboration in law enforcement to prevent and eliminate all forms of illegal activities within community forests and how they engage in awareness and capacity training programs.

5.4.1. Resource Withdrawal and Permission

“The community lacks the capacity to formulate the community management plan. Currently, the community have yet to sign CFA with the government, but community members could still access forest resources providing it is for traditional and household use. If community members want to withdraw resources more than just traditional use, they need to ask permission from us, National Park rangers, and promise to replant the lost tree”.

Kirrirom National Park manager

(personal communication, October 25th, 2016)

According to the interviews with Kirrirom National Park manager (personal communication, October 25th, 2016), all CF members are allowed to withdraw any forest resources from community forests and protected areas provided that it is for the purpose of traditional and household use. There is no clear definition on how to define traditional use and amount of resources withdrawal, but community has followed their daily practice of withdrawal NTFPs without the needs to ask for permission from local authorities or park rangers.

However, for some withdrawal activities such as cutting down timbers for housing and construction, CF members need to inform CF committee in order to facilitate and get permission from local authorities and park rangers. The committee is responsible for ensuring that the amount of resources harvesting does not exceed the amount that have requested to local authorities and park rangers.

Kirrirom National Park manager (personal communication, October 25th, 2016) claimed that the community does not have CFMP due to community's limited capacity. Despite so, the community has negotiated informally with local authorities and protected area's park rangers to forest resources based on trust and mutual understanding on the commitment CF members in protecting and conserving forest resources sustainably.

5.4.2. Collaboration and Law Enforcement

According the law, the community does not have the power to apprehend or punish violators who caused damages to the community forests. Hence, they have to depends on law enforcement officers, protected area's park rangers, to engage in cracking down illegal activities within the community forests.

“We currently lacks the capacity to securely monitor and control outsiders from violating into the protected areas. Community members have participated such as reporting any individuals they suspected that these people may planned to go into the forest and cut trees, tracking perpetrators to find their hideout in the forests or even reporting illegal activities that they spotted during their trip into the forest to collect resins or harvesting other NTFPs. They usually reported directly to park rangers who regularly patrolled nearby or to the CF's committee to pass on the information to our park rangers”.

Kirrirom National Park manager

(personal communication, October 25th, 2016)

The community members, however, has participated indirectly in assisting park rangers to deter, prevent and crack down any illegal activities by

serving as a network of law enforcement in reporting and provide information about violators' activities.

“According to rule of CF, any CF members that engage in illegal activities for the first time would be given a warning either by verbal warning or rebuke on their action from CF members or the committee. If they were caught for the second time, the committee would complaint in written documents to criticize their actions. However, if it is still ineffective, then we have no other choice rather than report to park rangers to take legal action against them to prevent further damage to the community. Though, it is rare for CF members to engage in illegal activities nowadays because they know that it is wrong and would harm the community.

For non-CF members' violating activities, the committee would report to park rangers to educate, apprehend and/or confiscate forest crime evidence from these perpetrators as the community do not have power to apprehend violators. Usually, people that violate into community forests are villagers living nearby the community driven by poverty or the lack of understanding that these forests are restricted only for our CF members”.

In the case that perpetrators are CF members, villagers usually educate these people 84.2% (32) or rebuke 21.1%(8) them personally based on their relations in the community to try and make them understand how their action impacts on the community. But if the perpetrators were caught repetitively involving in illegal activities, villagers would report to local authority 21.1% (8) or to protected area's park rangers 26.3% (10) to take legal action against those people. However, if the perpetrators are not CF members but outsiders, villagers would not tolerate such action as 50%(19) said they would report to protected area's park rangers or to local authority 42.1% (16), while some chose to verbally educate those violators 42.1%(16) and criticize their actions directly 15.8% (6).

The community members could serve as important informants during their visit into the forest to withdraw forest resources. The community has also strengthened the collaboration in law enforcement by conducting joint patrol within and around the community forests. Although the patrol has not

conducted regularly due to limited financial support, it aims to help community to understand the strategic action on how to prevent and reporting in case there is any illegal activities happening within the community.

5.5. Summary

To summarized, the interviews with key informants has provided a good insight for researcher to better understand the management of Chambok community and how the system enable the participation of local community in making contribution to forest and natural resources protection and conservation in order to ensure good forest governance and its sustainability. The CF arrangement of Chambok community has adopted a similar Ostrom (1999)'s principles of self-governance community as previously discussed in the literature review where the community have been granted tenure rights of access, use and manage their resources through an established committee. The local people in Chambok community has participated in electing the committee as the governing institution to devise management plan, mobilizing community fund for community development and making decision for the community. The committee has also ensured the transparency of their decision through the free flow of information from villages' representative to their members to ensure that all members understand the community management plan and policy. The community people have participated in determining community action plan and making decision on the utilization of community fund during the general assembly through the election. This was done to ensure that all members are included in the collective action of the community efforts of trying to protect forest resources sustainably and provide long term benefits for community as a whole. In addition, they also collaborated with local authorities and protected area's park rangers to ensure the effectiveness of forest governance implementation of preventing outsiders from violating into community forestry and enhance the local community's attitude and commitment to forest protection and conservation.

Chapter 6 Findings and Discussion

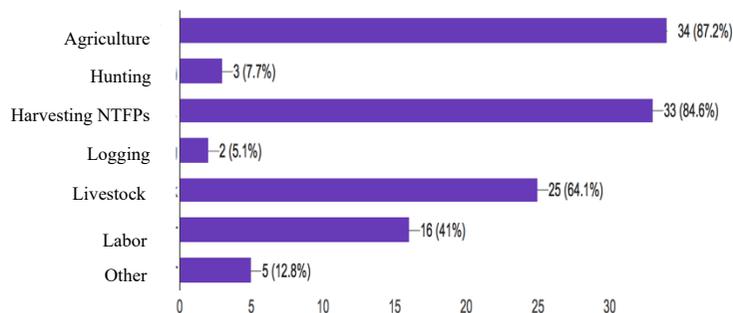
This chapter will focus on presenting, analyzing, interpretation and discussion on the finding with the description to provide simple basic interferential conclusion of the finding.

6.1. Survey Findings

6.1.1. Occupation, Income and Livelihood

Geographically the local community has engaged in diverse occupational type due to the nature of the robust environmental and agricultural system in the community. The survey showed that the livelihood strategies of the Chambok community people are mainly agriculture, animal livestock, collecting forest timbers and NTFPs such as bamboo, mushroom, fuelwood and poles, rattan, and timber for construction. Local people usually access to forest resources for household usage while timbers are mainly for trading. According to the survey, the source of income of the local livelihood was mainly agriculture with 87% (34) of respondents are farmers who engage in agricultural activities, 84% (33) harvesting NTFPs for their daily use and commercial use, 64% rely on livestock, 41% (16) providing labor service, hunter and logger are accountable for 7.7% and 5% respectively with the other 12.8% comes from other sources^④.

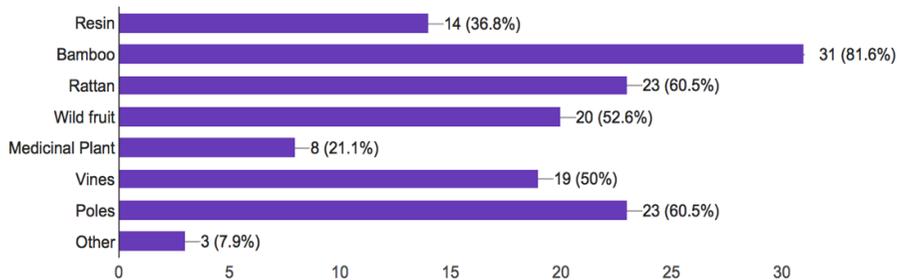
Figure 23: Respondents' Main Source of Income



^④ Figure 22

Local community has a large proportion of dependency on NTFPs than forest timbers. The purpose for cutting down forest timbers was mainly for housing construction or other agricultural related construction such as fencing and stables for animals. The variety of NTFPs use locally are resin 36.8% (14), bamboo 81.6% (31), rattan 60.5% (23), wild fruit 52.6% (20), medicinal plants 21% (8), vines 50% (19), poles 60.5% (23), and other type of NTFPs 7.9% (3)⁵.

Figure 24: Respondents' Varieties of Withdrawn NTFPs



Since the establishment of eco-tourism site in the community, it has caused many livelihood changes to the community. According to CF committee chief (personal communication, October 25th, 2016), eco-tourism has helped creating job opportunities for local communities including providing service of transportation, selling NTFPs and wooden handicrafts to tourists that provide additional income to cope up with local demands.

6.1.2. Perception and Attitude

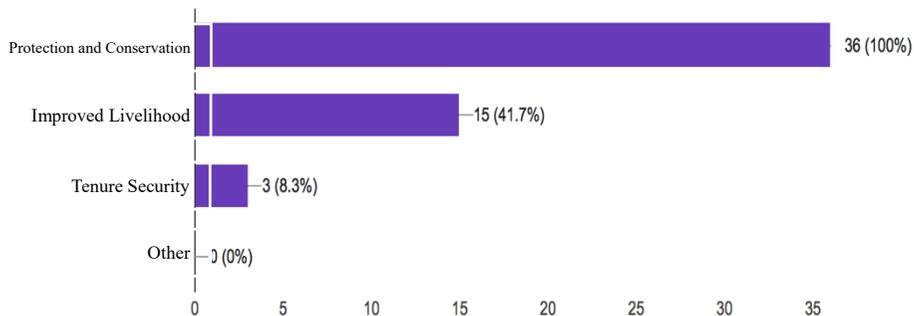
6.1.2.1. Local perception of forest value

In order to assess the local perception of forest value, the researcher has question three problems to respondent: whether respondents understand the purpose of CF, CF tenure rights over resources, and their personal perception on what direction CF should focus on improving the forest governance in the community. Interestingly, 100% (36) of respondents believed that the purpose of establishing CF to protected community forests and resources, while 41.7% (15) stated that it is for the purpose of improving local livelihood and income

⁵ Figure 24

generations, and finally, 8.3% (3) are persuaded that CF is an effective mechanism to secure their tenure rights over forestland and forest resources^⑥.

Figure 25: Respondents' responses on the purpose of CF

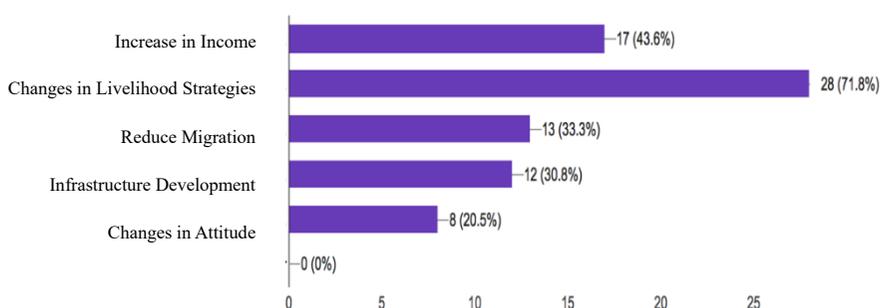


In addition, respondents believed that the adoption of CF arrangement has provided various advantages to the community such as increase in income generation 43.6% (17) from collective action of the community and eco-service provided to visitors to community site and change in livelihood strategies 71.8%, reduce migration of people moving out of the community to find job opportunities 33.8% (13), development of community infrastructure and changes in attitude of community members 20.5% (8) on the governance and protection of community forest resource^⑦. According to CF committee chief (personal communication, October 25th, 2016), each household has traditionally depended on man as the head of the family to harvest forest resources, hunting and logging to bring those resources to sell at the market as the mean to generate income and sustain their daily livelihood. With the development of eco-tourism service in the community, however, there has been an increase in women participation in CF activities through various arrangement such as preparing food, ride the cart and overseeing CF activities that does not require manpower to do those activities.

^⑥ Figure 25

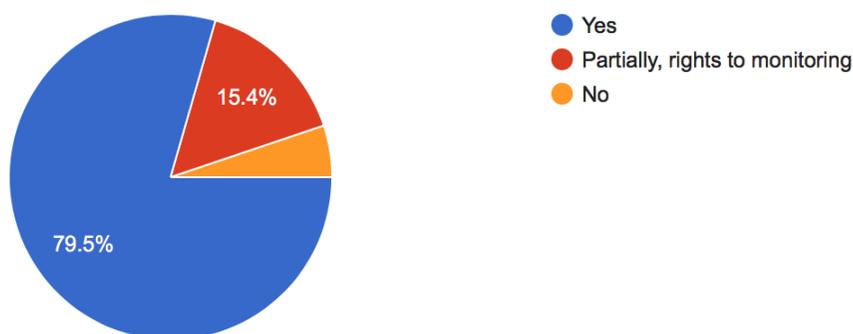
^⑦ Figure 26

Figure 26: Respondents' responses on advantages of adopting CF



As have previously pointed out in the previous chapter that Chambok CPA have yet to sign CFA with MoE, and thus the community should have limited access to resources. However, in practical situation, the collaboration between governing institutions and community have practiced an informal agreement of accessing resources through CFMC, while CFMC would report or seek permission to access resources that exceed traditional uses by local community. This can be verified by survey results that with 79.5% (31)[®] believed that they could exercise their tenure rights even without CFA. Despite so, CFA remains the most viable option for community in order to ensure their long-term benefit and sharing over forest resources and prevent unnecessary potential conflict with outsiders that may arise in the future.

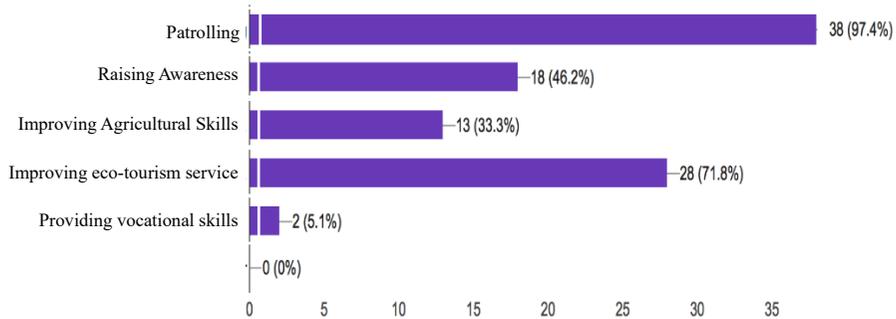
Figure 27: Respondents' Perception on Tenure Rights



[®] Figure 27

The future plan for CF management plan include the continuation of patrolling activities 97.4% (38) to deter, prevent and crack down illegal activities within CF, raising awareness on the importance of CF in forest governance and management policy, improving eco-tourism service for better contribution to livelihood and poverty alleviation 71.8% (28), improving agricultural skills 33.3% (13), enhancing vocational training for local community 5.1% (2)⁹.

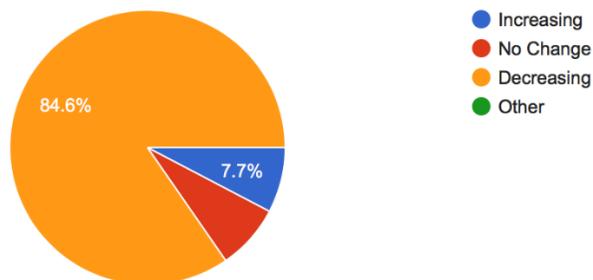
Figure 28: Respondents' Perception on CF Management Plan



6.1.2.2. Local perception of governing institutions

The perception of local community is one of the most significant elements in forest governance. If the government fails to garner public trust or have limited interaction, it could jeopardize or even break the harmony of forest governance as well as the relationship between users and authority.

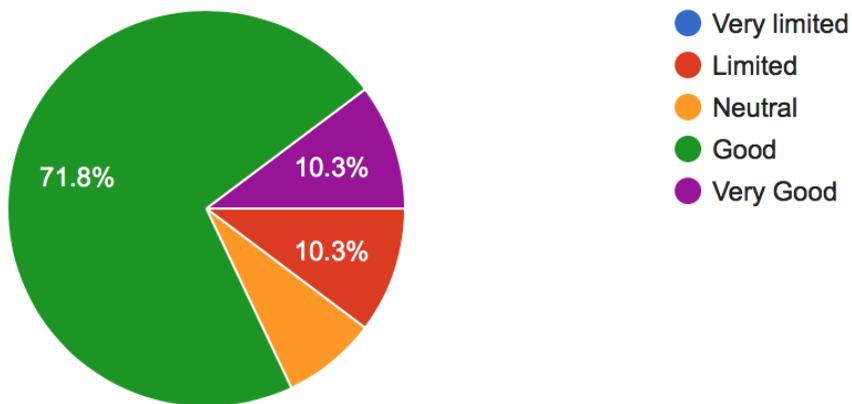
Figure 29: Respondents' Perception related to illegal activities in CF



⁹ Figure 28

According to the response from the survey, it is believed that there is a decrease in illegal activities with 84.6%^⑩ positive response that the decrease is within the community forest due to regular patrol. While elsewhere is experiencing continuous forest loss. The majority of participants are convinced that generally good with the majority 71.8% (28) said that it is good, 10.3% (4) very good, 7.7% (3), and 10.3% give (4) limited feedback^⑪.

Figure 30: Respondents' perception on the level of cooperation with local authority



6.1.2.3. Local perception and collaboration

The perception of collective action is depending on the level of trust, interaction and inclusive of CF members in the CF process. Any improper distribution of information, inequality between benefit sharing among CF member could revive the problem of “free rider-effects” and the division of interest groups within the CF.

Apparently, the solidarity amongst CF members is one of strongest point of the community accountable for about 74.4% (29), good leadership 30.8% (12), good cooperation with stakeholders 35.9% (14), and working closely with park ranger 10.3% (4)^⑫. According to the interview with key informants, the

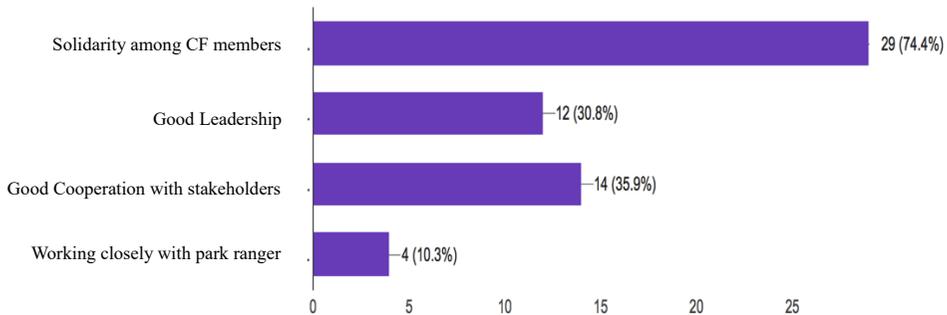
^⑩ Figure 29

^⑪ Figure 30

^⑫ Figure 31

community have yet to arrange any official documents that define principles of benefit-sharing and distribution of resources and other environmental service such as eco-tourism within the community but practice an informal social agreement on the proportion of share benefits between concerning members.

Figure 31: Respondents' Perception on Strength of CF



6.2. CF and Forest governance

6.2.1. Access to forest resources

Based on result of the study, we found that the community has high degree of accessing the forest resources within community forests and protected areas. The CF arrangement has help community to obtain secure access of forest resources through clearly demarcated boundaries and recognition from government and responsible agencies. It does not intend to undermine the rights of traditional uses of resources but the recognition in continuation of customary practice over resources. As stated in Article 20¹³, any access to traditional uses of natural resources and customary practice, beliefs and religions of local community and indigenous ethnic minority groups are recognized and allowed within the protected areas.

¹³ Protected Areas Laws, 2008

Figure 32: Comparison between traditional management system and CF management system

Criteria	Traditional Management System	CF Management System
Tenure Rights	Informal	Yes
Harvesting	Customary Practice	Collective Planning
Who can use resources?	Anyone	Only community
Governing Body	Individual	Committee
Defined Boundaries	No	Yes
Formal Recognition	No	Yes
Resources Accessibility	No Limit	Within CF Boundary

The CF management system help enhances the effectiveness of collective action of local community through the promotion of joint participation in forest governance and longer term efforts of conservation and protection of forest resources.

6.2.2. Participation

The participation in the process of CF management and forest governance is the crucial part this research. If the rights of local community were undermined in any aspect, it would affect the performance and effectiveness of CF to play roles in ensuring sustainable forest management and forest governance policy.

Local community participate in decision making, influencing policy planning within community forest and patrolling activities within surrounding protected areas through regular meeting either by representative or participate directly provided that the member does not occupied by other activities. The regular meeting between CF group representatives was conducted monthly and the annual meeting where all CF members are invited to participate in voice their language on all aspects that has been happening around and within

community forests and protected areas. Through participation, community could

According to the interview with CF committee chief (personal communication, October 25th, 2016), CF members could also be proposed to be the member of CFMC if they have demonstrated their potential and leadership to lead the community and increase good cooperation with local authorities and park rangers station within the protected areas. The selection based on the democratic election; candidate with the majority votes would earn momentum to lead the community. The community may also participate in law enforcement network through reporting of information, track or any activities within the community forests against potential threats on the community forest resources.

6.2.3. Awareness and accountability

Understanding the importance of resources and responsible over its management is some important characteristics for sustainable forest governance. The locals are well understanding the risk and effect of the loss of natural resources and biodiversity could impact only to their livelihood but also to the security over their tenure rights as well. Despite the lack of legal framework to fully support the implementation of CF. The free flow of information and communication within the community is the key to understand their rights as CF member and individuals within the same ecological environment.

CF allows for public participation in decision-making through CFMC and multi-purpose management of natural resources. It also contributes to long-term sustainable forest management by conserving forests as well as mitigating the effects of climate change against deforestation and forest degradation.

6.3. Discussion

The effectiveness of CF implementation is noticeable through respondent perspective that despite an ongoing decrease of forest conditions elsewhere, the community is able to achieve better result in improving community forest condition due to the decrease of illegal activities in the last three years and good cooperation between community local communities. In

term of CF implementation, all participants have showed positive response on the adoption of CF in Chambok and the reduction of forest offense occurred in community forests. Despite so, it cannot eliminate illegal activities especially from new comers who settle down nearby and intrude into community forests to exploit the forest resources that are being protected. According to participants' response, the illegal activities of cutting forest timber and encroachment has been decreasing in the last three years from within community forests. The potential violating activities comes from outsiders who try to take advantages of community through influencing local governments and some instances of local people who seeks to exploit the resources due to poverty, unemployment and lack of knowledge of the risk and cumulative impacts on long-term sustainability of the resources. The community also cooperates with park rangers, local authorities and NGOs who have authority to conduct regular patrol within community forest to deter, prevent and crack down any illegal activities from occurring within the CF community. CF arrangement and continuous capacity building and involvement of local community in making decision on CF management plan has strengthen good cooperation between CF members, and CF members and park rangers.

CF arrangement help community to establish secure and clearly defined boundaries to safeguard against violation from external threats and granted community power for them to establish their own management on how they would use or make use of resources for the greater benefits of community as a whole. It also showed that CF arrangement enable people in the community to generate income through eco-tourism in which they transform the gifted natural landscape environment in the community to help them generate additional income to support community livelihood by selling forest products to visitors and charging for service from those visitors. A robust system of community participation and good relationship with government officials, park rangers, local authorities and supporting NGOs has helped boost development potential of local livelihood as well as the noticeable dynamism of forest governance within the ecological and environmental diversity of Chambok CPA in Kirrirom National Park.

Base on the result of the survey, we could draw a SWOT Analysis table of Chambok CF as followed:

Figure 33: SWOT Analysis of Chambok CF

Strengths	Weaknesses
<ul style="list-style-type: none"> - Good cooperation between CF members, CF members and ranger. - CF members understanding the benefit of CF arrangement. - Trust on National Park's rangers and local authority. 	<ul style="list-style-type: none"> - Poverty and Increasing demands of local people. - Lack of funding to support patrolling activities to deter illegal activities within CF areas. - Limited cooperation and response from local authority to forest conflict and illegal activities.
Opportunities	Threats
<ul style="list-style-type: none"> - Positive impression of local community on the CF arrangement and commitment to participate for greater good of community. - Geographical convenience to enable eco-tourism as an alternative means to generate income and reduce local community dependency on forest resources. - There are NGOs support CF such as Mlup Baitong and KYSD who help community to build and develop eco-tourism activities. 	<ul style="list-style-type: none"> - Encroachment of outsiders and some community members trying to exploit forest resources within CF boundaries. - Forest conflict over community forestland due to outsiders try to influence local authority to claim community land illegally.

However, there are still limitation that considered to be obstacle for CF implementation. Firstly, the external threats from outsiders to seek forest resources due to its high economic value of forest resources and forestlands constantly violate into community forest to exploit community resources or encroach community forests. In addition, the cooperation between local

authority in order to quickly response to community threats and tackling conflict issues is limited. Survey showed that the majority of CF members and local authority working with community all have negative impression on the performance of local authority as a whole due to constant. Another obstacle is the funding the support the implementation of CF arrangement to self-govern itself as the community is not able to engage in management planning due to the lacks of understanding of policy and management system. Although the community has shown considerable level of awareness and commitment in participation for the improvement of community as a whole, many sources of support came directly from local NGOs such as Mlup Baitong to help community to progress forwards, vocational trainings and supporting patrolling activities. The situation remains unclear whether the community would be able to continue the good practice of CF implementation and collaboration if local NGOs cease to support the community.

Chapter 7 Conclusion and Recommendation

7.1. Conclusion and Recommendation

The research has begun by discussing the difficulty of managing forest resources with the limit availability and constant competition over resources from rational actors. It further identified that community participation through the transfer of tenure rights through self-governance community could be the solution to help ensure good forest governance and forest resource sustainability especially in Cambodia. The policy implication in Cambodia indicates that government has initiated community forestry implementation as a mean to bring about community's participation in forest governance to help manage and utilize forest resources more effectively and efficiently. The research was conducted to identify the role of community's participation in forest governance in Cambodia by focusing on the case study of Chambok CPA in Kirrirom National Park, Protected Areas. We began by examining how the government policy decentralized governance power to local community and enable participation of rural community to access, manage, organize and secure community forests. The research found that the rural community's participation in community forestry arrangement has increased awareness of local community on the importance of forest resources, caused changes in perception and attitude towards resources utilization, empower their self-governance role over community forests and motivated their participation to forest governance in order to ensure sustainable forest management and the robust and dynamism of cooperation between community people and stakeholders.

This research concluded that integration of rural people participation could help stimulate the dynamism of interaction between local community and local government in achieving good forest governance in Cambodia in order to try to control the utilization of forest and natural resources and tackle forest issues. It could potentially lead to an effective and efficient ways of community self-governance of forest resources and eliminate the problem of free-rider effect cause by the lack of participation and resource stewardship of individuals on the community forest resources. The community has established a strong

level of participation in forest governance through the negotiation of information agreement between CF and CF members, local authority and park rangers, despite being at the disadvantage of lacking necessary legal support to fully taking advantages of community forest resources.

Consideration on the impact of external factors that obstruct policy adoption by limiting effectiveness of participation forest management policy and community forestry implementation must be regarded with utmost importance. In addition, maintaining the government relationship with the people by taking into consideration their feedbacks and complaints are important element to help redesign policy implementation in order to achieve more effective result. The research proposes the following recommendations:

- Promote inclusive policy of CF's participation in formulating, managing and implementing all dimension of forest management policy including ecological, social and economic development.
- The role of rural people participation in the forest management policy should be emphasized more because they could reduce the free-rider effects, the temptation of forest logging and overharvesting of the natural resources as well as serve as an important law enforcement network that help crack down and preventing illegal activities that is happening in the forest areas.
- Promoting the extension of forest governance policies, laws and regulations through raising awareness and capacity building programs to rural community and relevant stakeholders.
- Enhancing close relationship and interaction between local authority and rural community to establish trust and effective law enforcement network to prevent illegal activities in community forestry claimed territory.
- Enhancing government invention in seeking market opportunity for agricultural products, forest products and provide more option for trading resources.

- Promoting livelihood alternative strategies such as eco-tourism development to reduce dependency on the forest resource from demands for unnecessary use of resources, improve livelihood, create employment opportunity, and generate income.

7.2. Limitation of the Research

Distance, resources and time constraints are major limitations for researcher to conduct research study. There could be an imbalance between primary data and secondary available to the researcher. Due to this reason, this research has given more attention on the analysis of the secondary data from existing research, journal, online sources, relevant reports on the forest tenure policy in Cambodia. However, the research may not be generalizable to fully understand the nature of forest management in Cambodia; instead, it would be an important instrument to understand the context of community forest manage in Cambodia and how it complements the forest management policy implementation to achieve sustainable forest management.

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Appendix

Questionnaire Form

Dear respondent,

My name is Tarapong Sokkheng, a research student of the Seoul National University. Thank you very much for agreeing to participate in this survey.

I am currently a research student who interest in the role of community participation in forest governance in Cambodia. This survey aims to understand the how the participation of local community impacts forest governance and sustainable forest management in Cambodia.

The information provided by you in this questionnaire will be used for research purposes. It will not be used in a manner which would allow identification of your individual responses.

Thank you.

1. General Information
 - a. Gender.....
 - b. Occupation.....
 - c. Number of household members.....
2. What are the livelihood strategy of community people living within and nearby protected areas?
3. What do you think about nature resources status in Cambodia?
Increase No Change Slightly Decrease Greatly Decrease
4. What types of forest products and by-products being harvest by community?
5. What are the purposes of using forest products and by-products?
6. What are the purposes of the establishment of CF(PA)?

7. What are the process of CF(PA) establishment from initialization to obtaining CF(PA) agreement? (Please rank from 1 to 8 in sequential order)

	Consultation and Assessment on natural resources potential with community participation and relevant stakeholders
	Submit a formal application requesting CF establishment
	Establishment of management structure and committee
	Demarcation of community forest boundaries
	CF(PA) Management Plan
	Monitoring and Evaluation
	CF(PA) Agreement
	CF(PA) by-laws (Regulation)

8. Prior to signing CF(PA) Agreement, can CF(PA) exercise their tenure rights of access, use and manage natural resources?

Yes Partially, rights to monitoring No

9. What are the management plan of CF(PA) after signing CF(PA) Agreement?

10. Within the last three periods, what is your impression regarding the illegal activities within community forest?

Increase Decrease

11. During patrol, if CF(PA)member(s) encounter illegal activities, what can they do?

- For violator(s) being member(s) of CF(PA)

Educate Rebuke Apprehend Report to local authority

Report to specialized officer/park ranger No idea

- For violator(s) who are not member(s) of CF(PA)

Educate Rebuke Apprehend Report to local authority

Report to specialized officer/park ranger No idea

12. In your opinion, what do you think on the facilitation and support from local authority and specialized institution on the management of protected areas?

13. What are factors that motivate rural people to engage in illegal activities?

14. What are the advantages of the establishment of CF(PA) to CF(PA) members?

15. In the process of natural resource management, what are challenges and obstacles to CF(PA)?

16. What can be done to ensure flat and sustainable management for CF(PA)?

17. What are the strength of CF(PA) management?

18. What kind of intervention(s) do CF(PA) need from:
 - From specialized officer/ park ranger

 - From Local Authority:

 - From non-governmental organization(s):

 - From stakeholder(s):

 - From Donor(s):
19. Is there any significant impact result from the implementation of CF(PA) manageable worth mentioning?

20. Recommendation

국문초록

캄보디아의 지역 산림 정책의 집행에 관한 연구: 산림 거버넌스에의 참여를 중심으로

Tarapong Sokkheng
서울대학교 행정대학원
글로벌행정 전공

이 연구는 캄보디아의 산림 거버넌스에의 참여를 지역 수준에서 논의한다. 그리고 공동체 기반의 관리를 통해 산림 거버넌스 정책에 공동체의 참여가 중요함을 밝혔다. 또한 공동체 기반의 산림 거버넌스에의 참여 양태와 인식, 태도 변화, 참여, 책임성과 법 집행의 연결망 등 산림 거버넌스의 주요 요인이 어떠한 영향을 미치는지를 확인하였다. 지역 공동체의 참여는 좋은 산림 거버넌스와 협력 그리고 문제의 해결에 중요한 역할을 한다.

이 연구에서 연구자들은 지역 공동체의 인터뷰와 설문조사 등 질적인 방법론을 사용하여 연구 결과를 묘사하고 설명한다. 또한 이를 보완하기 위해 문헌연구를 수행하였다.

연구를 통하여 지역 공동체의 참여는 산림자원의 중요성에 대한 인식을 증대시켰고, 자원 활용에 관한 인식과 태도의 변화를 이끌어 내었다. 뿐만 아니라 참여에의 동기를 높여 지역사회와

이해관계자들의 관계를 공고히 하고, 지속가능한 산림 관리를 가능하게 하였다. 또한 지역 자원의 관리에 있어서 관리자가 자원에 관한 정책을 수정 및 협상하고 권한을 강화하면서, 공동체의 참여 정도는 높아졌음을 발견하였다.

주요어: 참여, 산림 거버넌스, 지역 산림, 인식

학번: 2015-24464

