

Challenges and Prospects of Community Forestry in Cambodia: From the Perspective of Foresters' Performances in the Field

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Abstract

The performance of foresters has been indicated as one of the keys to successful promotion and dissemination of community forestry; however, majority of previous studies in Cambodia have described the works and activities performed by community forestry members and their achievements to reveal its status and issues. It is absolutely imperative to include the performance of foresters in the analysis of the status and challenges for further improvement in community forestry. Therefore, this study aims to identify the challenges and prospects of community forestry in Cambodia from the perspective of foresters' performance on community forestry. Performance of foresters was perceived by a comparative analysis between the perception of foresters in Cambodia and those from other experienced countries on their roles in community forestry implementation and a structured interview with community forestry members to identify the status of the assistance received from foresters for the implementation of community forestry. The results of these analyses revealed that even though the foresters are expected to act as coordinators and facilitators as well as supervisors of rural people, they lack the understanding on their roles. In addition, because of the low involvement of general members and poor function of community forestry, the possibility of a top-down approach has been indicated as the status of community forestry in the field. There is an urgent need to educate foresters on the social aspects of community forestry.

1. Introduction

1.1 Forest Resources in Cambodia

Cambodia shares forest resources as well as borders with Thailand, Vietnam, and Laos. Initially, forests in Cambodia were rich in diversity having nearly 900 tree species spread across mangroves, flooded forests, dry and moist deciduous rainforests, and evergreen forests (FAO 2005: 34). However, the forest resources have been decreasing rapidly since the beginning of the Pol Pot regime and Khmer Rouge, which led to genocide of over 2 million people and political instability until the establishment of the Paris Peace Accords in 1991. Although accurate information on the current status of forest resources in Cambodia is limited, it has been estimated that the forest cover was about 73%

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in 1960s and is 58% at present. The World Bank has estimated that annually, there has been a decrease of more than 100,000 hectare of the forests in Cambodia during 1973–1997 (World Bank 2003: 3). Even after the peace accords at Paris in 1991, 13% of the forest resources, including wood and shrub land, amounting to 1.7 million hectares, have decreased between 1992 and 1997.

1.2 Main Causes of Deforestation

The long civil war destroyed the former forest management system, which was adopted by France, and the concession system was newly introduced and promoted as the most effective management method. The concession system was set up in Cambodia by military and political leadership in 1994 as the primary method for the management of state forests and for the generation of income (Talbot 1998, Sok and Henry 2008: 87). Cambodia had to utilize forest resources as one of the main revenues for the rehabilitation of the people affected by the long civil war; therefore, the concession system was promoted as an effective way to manage the revenues collected from the forest. In 1995, the export of wood products generated USD 185 million in foreign revenue (Sok and Henry 2008: 87). Hence, over two-third of the total forest area in Cambodia, i.e., about 7 million hectare, was licensed to more than 30 concession companies by 1997 (Talbot 1998). International communities supported the system despite critical reviews, and it resulted in the loss of vast amount of valuable evergreen forests. The Royal Government of Cambodia declared moratorium of logging by concession companies in 2001 and requested them to submit a management plan on the basis of the newly enacted sub-decree regulations. However, currently, this system is non-functional. Insufficient management of logging concession has clearly contributed to the widespread illegal loggings, and therefore, is considered as the principle cause of the rapid forest depletion in 1990s (FA 2004, Shima 2005).

Besides the large-scale deforestation, over 85% of the entire population of Cambodia that resides in rural area highly depends on forest resources such as fuelwood; construction material; and wood for charcoal making, resin, medicine, yams, mushrooms for their livelihood. According to United Nations Development Program (UNDP), 35% of the entire population earns below the poverty line of USD 0.53 per day, and the National Institute of Statistics estimated that more than 90% of them are living in the rural area (UNDP 2008: 23, Ministry of Information 2008). Additionally, because dual cropping cannot be applied to most farming areas in Cambodia owing to the insufficient amount of water in dry season, many rural farmers who lose their income source in dry season tend to be engaged in small-scale illegal logging for earning cash. Thus, pressures from locals utilizing forest resources for livelihood and generating income have accelerated the deforestation process even after the establishment of the moratorium.

1.3 Evolution of Community Forestry as a New Management

In such circumstances, the government has taken action to improve the performance of the forestry sector by passing the Forest Law in 2002, and restructuring the old Department of Forestry and Wildlife into the Forestry Administration (FA) followed by adoption of the Statement of the Royal Government on National Forest Sector Policy on 26 July 2002 (RGC 2002). The policy focused on sustainable forest management by participation of local community as well as eradication of illegal logging, development of forest management plan and land use management procedure. In addition, a political reform plan called the “Rectangular Strategy” for growth, employment, equity, and efficiency was launched by the government in 2004. Under the new strategy, FA gradually perceived forest management by rural people who use the resources, namely, community forestry, as one of the effective approaches to contribute to poverty reduction and rural development, as well as for sustainable forest management. Community forestry has been set up in Cambodia by the Mennonite Central Committee, a NGO that organized community-managed plantations in Takeo province in early 1990s (Sok and Iida 2001; 216). Ever since, assistance for community forestry, including community-based natural resources management, has been initiated and promoted mainly by donor agencies, including national/international NGOs, the number of community forestry groups has been increasing annually (FA 2005b). Recently, the community forestry in Cambodia has been referred to as “sustainable forest management achieved by the participation of local people, by considering the involvement of local people in forest management as important, and by ensuring that local people obtain reasonable benefits from forest management. (CBNRM Learning Institute 2005; 38). Community Forestry Statistics in Cambodia has indicated that more than 280 community forestry groups, which include about 580 villages and 1.66% of the total forestlands, had been identified by 2006 (FA 2005b). Responding to such a situation, FA of Cambodia accelerated its efforts to promote Community Forestry via the constitution of a Forest Law in 2002, establishment of national-level community forestry office, approval of the Sub-decree on Community Forestry in 2003, and Prakas on Community Forestry and launch of Community Forestry Program in 2006.

Over the past 10 years, many issues and difficulties, including land demarcation, registration, capacity building of rural people and institutions, conflicts over land tenure status, and peoples’ participation, were indicated as the experiences by the numerous projects supported by donor agencies (CFRP Management Team and Field Research Teams 2005, Sokh and Henry 2007: 94). In addition, Sokh and Ty have indicated the lack of necessary technical support, including facilitation and organization development, as issues hindering the implementation of community forestry in Cambodia, from the perspective of FA (Sokh and Ty 2005). Other issues include, unclear land tenure, capacity building of community forestry groups and associations, and unclear planning processes (Braeutigam 2003: 32, Carson 1998: 361, Sokh and Henry 2007: 96, Sunderlin 2004: 9–10). However, these are only some of the issues because of insufficient documentation and periodical evaluation

mechanism. In order to elucidate all these issues, field evaluations need to be conducted.

1.4 Objective of this Study

Majority of the previous studies have described the activities performed by community forestry members and their achievements in identifying the abovementioned issues; however, community forestry is implemented mostly in the project areas falling under the donor agencies, and the evaluations are conducted by project staffs, including staffs of forestry office. The importance of the performance of forestry departments for the promotion and dissemination of community forestry has been already indicated in most of the experienced countries. Additionally, Sunderlin, Sokh and Ty, and Talbott have indicated the lack of human resources and necessity of capacity building as one of the most significant obstacles to extend CF in Cambodia (Sunderlin 2004: 9, Sokh and Ty 2005: 44–45, Talbott 1998). However, only few studies have included the performance of foresters based on field survey in analyzing the status and challenge of community forestry in Cambodia. It is absolutely imperative to involve the perspective of the performance of foresters and analyze their roles for further improvement in community forestry.

Therefore, this study aims to identify challenges and prospects of community forestry in Cambodia from the perspective of foresters' performance on community forestry.

2. Methodologies

2.1 Research design

Since the performance of foresters on community forestry is highly depending on their level of understanding, and assessment of their performance should not be rely on their self evaluation. Therefore this study intends to make assumptions about performance of Cambodian foresters by both perceptions of foresters on community forestry including level of understanding on their roles, and knowledge and activities of community forestry group members who should be assisted by foresters. In order to perceive the performance of foresters, this study consist of the following 3 components: (1) analysis of forester's expected roles toward community forestry promotion through past findings and mechanism/procedure of community forestry implementation, (2) a comparative analysis between perception of foresters in Cambodia and other experienced countries by questionnaire survey to identify their awareness on their roles in community forestry, and (3) a structured interview of community forestry members to identify the status of the assistance provided by foresters for the implementation of community forestry. Then, the perception of foresters and the current situation of community forestry activities were analyzed with the expected roles of foresters to identify further challenges and prospects for promoting community forestry. Details of survey on (2) and (3) will be introduced in the following 2 sections.

2.2 Surveys on perception of foresters

In order to identify the perception of foresters in Cambodia on their roles for supporting community forestry, comparative analysis between Cambodian foresters and foresters from other experienced countries was conducted. Target of the questionnaire survey in Cambodia was chief/deputy chief of the Forestry Administration at the provincial level, called Cantonment. Administrative section of the Royal Government of Cambodia (RGC) consists of 24 provinces, and each province has districts, communes, and villages; however, FA has its own administrative section that comprises 4 Inspectorates, 15 Cantonments, 55 Divisions, and 170 Triage, according to the forest cover of Cambodia. While the target of this survey was 2 staffs whose responsibilities were to manage and promote Community Forestry activities in each Cantonment office under the project supported by the Japan International Cooperation Agency (JICA), chiefs and deputy chiefs of Division offices were allowed to answer the questionnaire in case the chief of the Cantonment nominated them to answer. The questionnaire mainly inquired about their perception on their roles, issues, and difficulties for supporting community forestry. The survey was conducted in 2007, and we could successfully collect answers from 42 foresters, of which 40 were valid responses with complete answer.

The questionnaire survey for foresters in the other countries was conducted in Japan. Respondents to the questionnaire were foresters who participated in the International Cooperation Seminar on Operation of the Natural Environment Conservation Project that Incorporates Resident-Participatory Livelihood Improvement. The seminar assembled managers/assistant managers of the projects supported by JICA across 10 countries in ASEAN (Indonesia, Laos, Malaysia, Myanmar, Philippines, Vietnam, and Cambodia) and Central and South America (Brazil, Dominican Republic, and Panama). The participants were requested to answer the questionnaire. The results were applicable to a comparative analysis of the perception of Cambodian foresters; hence, the responses from Cambodian members were excluded. In all, 24 respondents from 9 countries, except Dominican Republic, answered the questionnaire, of which 20 valid answers were analyzed.

2.3 Survey on the perception of community forestry members

A structured interview was conducted for community forestry group members in Prusad and Kampong Spue province, which has rich forests and severe issues regarding deforestation. Although these provinces do not have large-scale community forestry project operated by donor agencies, small-scale NGOs support local people for community forestry and other community-based natural resource management. Nearly half of all the officially registered community forestry groups in each province — 20 out of 47 groups in Prusad and 4 out of 8 groups in Kg. Spue — were selected as the target of this survey. A total of 2 members from each group, one leader figure (chief or deputy chief) and a general member, were subjected to structured interviews on their perception and availability of basic information such as name, number of member households, year and purpose of establishment of their

own community forestry group. Moreover, only the leader figure of each target group was enquired about the community forestry formation procedure and its issues. Therefore, a total of 24 groups with 48 respondents were accepted as valid answers out of the 25 groups with 50 respondents.

3. Results and Discussion

3.1 Expected Roles of Foresters in Community Forestry

Generally, community forestry is management of forest resources by group of local people who are traditionally depending on the forest resources. Although each country has different system in terms of legal status, registration, land ownership and function, mechanism itself is quite the same. Generally, user group is formed as the first step then, identify the location and area of forest for the group, and establish and follow their own regulation to manage and utilize their designated forest area in sustainable manner. Since the emergence of the concept in late 1970s in Asia, the experiences and lessons learned have been accumulated across the world. Until the early 1970s, classical forestry ignored the interdependence between forests and rural people, and forest management was focused on industrial-commercial plantations and prevention of forest resources as national revenue. The main roles of foresters at that time were to be a watch dog or “guarding the national resource from illegal exploitation,” technical engineer of plantation, and distributor of tree seedlings to rural people (Berry and Phil 1995: 8). However, recognition of failure to conduct classical forestry, and the fact that poor rural people tend to depend highly on forest resources as livelihood, as well as for income generation, has led to the development of a new forest management system. In order to combat the vicious cycle of poverty and deforestation, there was a need for the people who cannot sustain their livelihood without forest resources to find an alternative source of income from both inside and outside forests. Subsequently, forestry moved to embrace far broader economic, social, and environmental concerns (Berry and Phil 1995: 3).

According to FAO, since 1980s, the roles of foresters have changed substantially from traditional/classical forestry to social/community forestry, environmental conservation, etc. in Southeast Asian countries (FAO 2004). With the change in the system, the human aspect of forestry is becoming important; therefore, foresters are expected to be able to deal with forestry, agroforestry, as well as environmental issues, using multi-disciplinary and participatory approaches (FAO 2004). Table 1 summarizes the basic changes in orientation of forestry and indicates the usefulness of sufficient communication on the basis of the concept of bottom-up and participatory approaches. Thus, community discussion is always the first step of the starting activities, as well as the key activity, of community-based natural resources management (Strek 1997: 219). Past findings have revealed that the roles of foresters for community forestry seems to be shifted from technical to social aspect, especially, communication, facilitation, and education of rural people, to appropriately manage their

community forestry by establishing good trustworthy relationship.

Community forestry system under the Sub-decree and Regulation of community forestry in

Table 1 The basic changes of in orientation of forestry

From Classical Foresters	⇒ To Social Foresters
◆ Working for the interest of the forest department	⇒ Working for the interest of rural people
◆ Forest management	⇒ Forestry extension work
◆ Protecting forest against rural people	⇒ Involving people in management of woody biomass in and outside gazetted forest areas
◆ Seedling production and distribution	⇒ Facilitating local tree regeneration
◆ Plantation management	⇒ Total woody biomass management
◆ Timber and pulp trees	⇒ Multi-purpose trees and shrubs
◆ Standard forestry management system	⇒ Systems that build on locally existing knowledge of tree and forest management

Source: Adapted from Berry and Phil 1995

Cambodia has also indicated that the social aspects of assistance are the indispensable roles of foresters. All the necessary procedures for community forestry establishment, which should be supported by foresters, have been divided into 8 steps as shown in Figure 1. It is notable that none of these steps can start without sufficient and appropriate discussion/communication with local people in the target area to determine their situation, issues, and demands. For instance, although there are 3 significant official documents for establishing community forestry: Community Forestry Regulation, Community Forestry Agreement, and Community Forestry Management Plan, preparing these documents is definitely necessary to initiate information delivery and discussions with local people to form a Community Forestry Management Committee and to demarcate the community forestry area. Demarcation and identification of the community forestry area is technically achieved by using Geographic Information System (GIS); however, this area cannot be identified without communicating or discussing with local people even though the technical knowledge is available. More importantly, GIS is useful to compile all the data from the viewpoint of the central office of the Forestry Administration. However, simple methods such as participatory mapping can be sufficient as alternatives of GIS. In case of Cambodia, Sok and Henry indicated insufficient capacity of forestry staffs to play key roles in the development of community forestry in collaboration with local people and to document field experiences and lesson learned (2008). Additionally, Community Forestry Research Project (CFRP) Management Team and Field Research Teams have also indicated the necessity of sufficient skills, especially facilitation and communication with local people, as their lesson learned through active research on community forestry formation procedure (2006). Therefore, support for social aspect such as delivering information on the concept of community forestry to local people, assisting discussions, and encouraging decision-making among local people, motivating and

Figure 1 Main Procedure of CF Formation and its Description

1. CF Formulation <ul style="list-style-type: none"> - Communities receive information on CF - Interested communities submit an application to FA cantonment for approval - Set up working groups to collect information on community and utilization of forest resources
2. CF Management Structure <ul style="list-style-type: none"> - Temporal CF Management Committee (CFMC) is established
3. Development of CFMC's By-Laws <ul style="list-style-type: none"> - CFMC by-laws are developed with the approval from CFMC chief - The by-laws are approved by the chief of CFMC and recognized by Commune Council. - Disseminate the by-laws to CF members
4. Boundary demarcation and planning <ul style="list-style-type: none"> - Boundary of the CF is demarcated using GPS. - Requires the involvement of community members as well as representatives of adjacent villagers in order to avoid future conflicts over boundary locations.
5. CF Regulation Development <ul style="list-style-type: none"> - The regulation is approved by the CFMC chief and recognized by Commune Council. - Distribution of the approved regulation to CF member
6. CF Agreement Development <ul style="list-style-type: none"> - Outlines the roles and responsibilities of the CFMC and Forestry Administration (FA) - Approved by FA in cantonment
7. CF Management Plan Development <ul style="list-style-type: none"> - Procedure and regulation for sustainable CF management based on data collection, mapping, training and discussion among stakeholders are drafted. - The final draft must be approved by the Head of the Forestry Administration upon recommendation by the cantonment chief
8. Monitoring & Evaluation <ul style="list-style-type: none"> - According to the approved regulation, agreement, and management, the activities are planned, monitored and evaluated.

Sources: Sub-decree on CF (Forestry Administration 2003)

Regulation on CF (Forestry Administration 2006)

Ty and Sokh (2005)

empowering local people, and coordinating with other local government offices are essential or fundamental activities for the development of community forestry. Thus, these activities as well as routine work, technical support and documentation of official letters should be included as the roles of foresters in Cambodia.

According to abovementioned procedure or mechanism of community forestry development and lessons learned in both Cambodia and other experienced countries, facilitation, coordination, and communication with local people; raising motivation; and empowerment of local people on the basis of the understanding of the bottom-up and participatory approaches are the most prioritized expected

roles of foresters for supporting community forestry implementation.

3.2 Reality of Foresters' Perception on Community Forestry

Results of the questionnaire surveys are shown in tables 2–4. To understand the perception of foresters, we enquired about the difficulties faced, significant issues, and roles of foresters in community forestry to foresters of both Cambodia and other countries via open-ended questions, and the results were categorized according to the keywords used for the analysis.

Table 2 shows the perception of foresters in both Cambodia and other countries about the difficult procedure of community forestry. The 2 categories, i.e., “introducing & implementing livelihood improvement activities” and “registration & legalization,” were mentioned by foresters in both Cambodia and other countries at almost the same ratio, and “clarify the boundary of community forestry area” was also answered commonly by both the groups. The major difference was in the answer of “find out situation, issues, and needs of the CF members.” Of the 33 Cambodian foresters, 24 (72.7%) thought that this aspect was difficult, while no such answer was found among the foresters in other countries. According to the abovementioned results, Cambodian foresters tended to consider the beginning of the formation process of community forestry which requires sufficient communication skills to build trustworthy relationship with local people, including “clarify the boundary of community forestry area,” (69.7%) as difficult.

In this study, foresters of “other countries” were much more experienced in community forestry activities than those of Cambodia; therefore, it may be assumed that communication with local people has become one part of job duties or familiar routine work for foresters in other countries. On the other hand, Cambodia has just started to undertake community forestry activities by foresters. Although cracking down on illegal logging by local people was one of the main job duties of Cambodian foresters, building relationships of trust and communication link with local people were not their job duty until several years ago. The result may be influenced by these backgrounds and implementation phase of community forestry activities. Another considerable reason of difficulties in communication with local people to motivate them is historical background. In Cambodia, general functions of communities especially mutual complementary relationship among neighbors was completely destroyed under the Pol Pot regime. Even today, local people are not easily trust with each other because of negative legacy of the regime therefore, it may be difficult to build trusting relationship among community forestry group members through communication to share benefits from resources.

Regarding significant issues in the operation of community forestry, no particular tendency was observed among the answers of Cambodian foresters (Table 3). On the other hand, foresters from other countries showed a higher ratio on “registration & legalization” (60.0%), “coordination with local institutions” (70.0%), and the highest ratio of 75.0% for both “poverty reduction & livelihood of rural area” and “consensus building among stakeholders to form community forestry.” Coordination,

Table 2 Difficulties/constrains of CF

Answers	Cambodia		Others	
	%	(Number)	%	(Number)
• Find out situation, issues and needs of the CF members	72.7	24	0.0	0
• Clarify the boundary of CF area	69.7	23	50.0	9
• Introduce & implementing livelihood improvement activities	48.5	16	55.6	10
• Registration/ligalization	48.5	16	55.6	10
• Discussion and decision making among all CF members	30.3	10	50.0	9
• Planting trees in CF area	9.1	3	0.0	0
• No answer	3.0	1	0.0	0
• Lack of capacity of foresters	0.0	0	22.2	4
• Budget limitation	0.0	0	22.2	4
• Others	15.2	5	16.7	3
Total number of answers		93		46
Total number of respondents		33		18

Source: Survey data

consensus building, and livelihood improvement that are the popular issues in many countries were recognized by foresters in the other countries. In addition, activities related to these issues were indicated as important roles of foresters in the previous section. Moreover, because the Article 12 of Sub-decree on community forestry in Cambodia prohibits even members of CF to harvest timber for sale within the first 5 years of approval of the CF Management Plan, livelihood improvement activities as a part of community forestry is significantly important for sustainable community forestry (RGC 2003: 5). In Cambodia, although these activities have already been recognized as important issues, only few Cambodian foresters have knowledge about these issues compared with the foresters in other countries. According to the results, foresters in Cambodia have less awareness on social aspects such as coordination, consensus building through discussions with local people, and livelihood improvement even though these issues are important expected roles of foresters.

Significantly different responses between Cambodia and other countries were observed on the roles of foresters (Table 4). Although more than half (55.6%) of the foresters in the other countries answered “coordination among stakeholder” as a role of foresters, only 29.4% of Cambodian foresters provided this answer. Even though no foresters in the other countries recognized “identifying potential CF area” as one of their roles, 32.4% of Cambodian foresters answered it as one of their roles. In addition, nearly one-fourth and one-fifth of the Cambodian foresters recognized “support to prepare legal document” (26.5%) and “arrange budget & aid agencies” (14.7%) as their roles, respectively, while no foresters in the other countries considered these activities as their roles.

According to these results, the social aspects of community forestry activities, which are the important roles of foresters, such as “distribute information/raise awareness on CF,” “extension

Table 3 Significant issues regarding CF

Answers	Cambodia		Others	
	%	(Number)	%	(Number)
• Registration/ legalization	20.6	7	60.0	12
• Defining boundary of CF	20.6	7	35.0	7
• Poverty reduction/ livelihood of rural area	17.6	6	75.0	15
• Encroachment of forests	17.6	6	0.0	0
• Ensure sustainable forest resources use	14.7	5	0.0	0
• Lack of budget	14.7	5	0.0	0
• Consensus building among stakeholders to form CF/participation	14.7	5	75.0	15
• Limitation of local capacity and knowledge	8.8	3	0.0	0
• NGOs do not have any skills on forestry	5.9	2	0.0	0
• Coordination w/ local government	0.0	0	70.0	14
• Extension service	0.0	0	55.0	11
• Forester's attitude to local people	0.0	0	45.0	9
• Foresters' knowledge on registration process and forest law	0.0	0	10.0	2
• Nursery establishment	0.0	0	10.0	2
• Others	5.9	2	0.0	0
Total number of answers		48		87
Total number of respondents		34		20

Source: Survey data

Table 4 Roles of foresters in CF

Answers	Cambodia		Others	
	%	(Number)	%	(Number)
Identify potential area for CF	32.4	11	0.0	0
Coordinate/facilitate among stakeholders	29.4	10	55.6	10
Support to prepare legal document	26.5	9	0.0	0
Provide Law /regulation on CF	23.5	8	22.2	4
Support legalization/ CF formation	14.7	5	11.1	2
Provide technique	14.7	5	11.1	2
Arrange budget & aid (NGOs ect)	14.7	5	0.0	0
Problem / conflict solution	5.9	2	0.0	0
Capacity building and staff training	5.9	2	0.0	0
Land demarcation	5.9	2	0.0	0
Distribute information/ raise awareness on CF	0.0	0	33.3	6
Extension worker	0.0	0	33.3	6
Supervisor	0.0	0	22.2	4
Patiently implement CF work	0.0	0	16.7	3
Support income generating activities	0.0	0	11.1	2
Partner of community	0.0	0	11.1	2
Monitoring & evaluation	0.0	0	11.1	2
Others	5.9	2	11.1	2
Total number of answers		61		45
Total number of respondents		34		18

Source: Survey data

worker,” and “supervisor” were highly realized by foresters in the other countries than by Cambodian foresters. This implies that community forestry activities in the other countries assumed to be implemented mainly by initiative of local people with support from foresters in accordance with concept of community forestry because most foresters thought support for local people as their roles. On the other hand, Cambodian foresters thought activities of local people such as “identifying potential CF area” as their roles and it seem to be conducted by foresters themselves. Therefore, community forestry activities in Cambodia seem to be implemented by forester’s initiative rather than that of local people who should be main actor of activities supported by foresters. Answers of “support to prepare legal document” and “arrange budget & aid agencies” were recognized only by Cambodian foresters as roles however, these should be considered as routine work but not special works for community forestry therefore, foresters in the other countries may not consider these as their roles.

Taken together, majority of the Cambodian foresters tend to consider the beginning of community forestry formation procedure such as acquainting themselves with the situation, issues, and needs of the local people, and clarifying the boundary as relatively difficult processes of community forestry. On the other hand, only few Cambodian foresters mentioned consensus building, and none of them answered coordination with local institutions, as issues of community forestry even though these 2 activities are commonly and frequently used social skills as bottom-up approach in the beginning of community forestry formation procedure. The discrepancy in these answers indicates the possibility that community forestry formation has been implemented without using the bottom-up approach in Cambodia and it may be caused by lack the understanding on their expected roles.

3.3 Reality of Community Forestry from the Perspective of Group Members

Table 5 shows the results of the structured interview with community forestry members. The results of this interview revealed that general members tend to have less information than leader figures. All the leader figures could name their community forestry area, and 22 respondents (91.7%) could answer the year of foundation, number of member households, and purpose of community forestry establishment. Besides, only 33.3% of the respondents could answer the reasons for legalization. On the other hand, only half of the general members could name their community forestry area. Although 75% of the respondents could provide the information of the year of foundation, only 16.7% could identify the number of member households, and only 2 respondents could answer the reason of legalization. The leader figure of each group such as chief or deputy chief has greater opportunities to have discussions with foresters and local authorities on community forestry; therefore, it is natural that the leader figure has more information than general members. However, the general members seemed to have extremely limited information because they could not answer questions regarding basic information, including name, establishment year, number of member households, and purposes of community forestry establishment, which is the minimal knowledge that

all the members should possess since they are involved in the community forestry formation procedure and activities, including meetings. This result indicated that general members probably were less involved in this process or that the community forestry functions poorly.

In addition, the procedure of community forestry formation was only asked to leader figures of each group. Only 4 out of the 24 groups have been supported by foresters to establish community forestry, and others have received or still under the process of receiving supports from both of foresters and NGOs. According to the results of the interview, all the leader figures whose groups have been supported by both of foresters and NGOs mentioned that they received sufficient information and held many meetings during the formation procedure. In addition, all of these groups conducted several activities such as tree planting, patrolling, and harvesting resources. On other hand, 2 out of the 4 community forestry groups supported only by foresters had experienced the formation procedure by signing the list of community forestry members without having sufficient information about community forestry. According to the leader figures of these community forestry groups, foresters visited the village one day, and gathered villagers to obtain their signatures against their names. Therefore, many members still did not realize that they were the members of the community forestry. Additionally, only 1 of the 4 groups has been conducting activities such as tree planting, patrolling, group meetings and harvesting forest products. However, there may be extreme or rare cases that have been indicated by this field study regarding the possibility of a top-down approach, especially by foresters in community forestry formation procedure.

Table 5 Foresters' basic knowledge on their own CF

Items	Leader figures		General members	
	Respondents	%	Respondents	%
Name of CF	24	100.0	12	50.0
Year of foundation	22	91.7	18	75.0
Number of members	22	91.7	4	16.7
Purpose of CF	22	91.7	12	50.0
Meaning of legalization	8	33.3	2	8.3

Total number of respondents: Leader figures = 24, general members 24

Source: Survey data

Conclusion

This study aims to identify the challenges and prospects of community forestry in Cambodia from the perspective of foresters' performance in community forestry via a analysis of foresters' roles, a comparative analysis between the perception of foresters in Cambodia and those from other experienced countries on their roles in community forestry implementation, and a structured

interview with community forestry members to identify the status of the assistance received from foresters for the implementation of community forestry.

Results of the role analysis by using past findings, the laws/regulations in Cambodia and the experiences of the other countries clarified the main roles of foresters in community forestry procedure as reliable coordinators and facilitators with sufficient understandings of bottom-up and participatory approach for consulting and rising motivation of rural people, rather than by using technical skills. However, results of the surveys on perception of foresters showed that essential social actions and skills such as consensus building, coordination among stakeholders, extension work, and distribution of information on community forestry were not recognized by Cambodian foresters as a part of their job. This noticeable trend seems to be lacking among Cambodian foresters to understand their roles in community forestry.

The results of structured interview with community forestry members indicated the possibility of either low involvement of general members or poor functioning of community forestry because the general members had extremely limited knowledge on their own community forestry. Moreover, the 2 community forestry groups were established only by foresters by using the top-down approach without holding meetings, discussions, or sharing information and building consensus among stakeholders. Although—the data is still limited—results from this field study indicated the possibility of top-down approach in community forestry formation procedure.

In conclusion, although analysis of this study is limited, performance of Cambodian foresters seems insufficient to undertake expected roles. Even though the foresters are expected to act as coordinators and facilitators as well as supervisors of rural people, they lack the understanding on their roles. In addition, because of the low involvement of general members and poor function of community forestry, the possibility of a top-down approach has been indicated as the status of community forestry in the field. In order to fulfill the expected roles of foresters in Cambodia, the following issues need to be addressed and undertaken urgently. First, capacity building for foresters should be more focused on the concept, social aspects, and its skills on community forestry, including coordination and facilitation skills on the basis of sufficient understanding of the bottom-up approach. General functions of communities especially mutual complementary relationship among neighbors in Cambodia was completely destroyed under the Pol Pot regime therefore, it may be difficult and need high skills to build trusting relationship among community forestry group members to share benefits from resources. Foresters in Cambodia must have sufficient facilitation and communication skills which can motivate local people to manage their forests in order to deal with negative legacy from the past history. At the same time, leading initiative of local people who will be manager of forests is one of the most important in community forestry because community forestry activities without it will be a top-down and conventional forest management which has been failed in many experienced countries. The trainings for above mentioned difficulties should not be by the textbooks but by practice with

community forestry group members in the field combined with role playing method in the training class. Then, several trainers should be developed among Cambodian foresters who can train other foresters in accordance with situation and system of community forestry in Cambodia.

Appropriate understanding on the interaction between community forestry activities and livelihood improvement of rural people are also important because community forestry group members need to manage their community forest without harvesting resources during the first 5 years. Without this understanding, it will be difficult for foresters to successfully establish meaningful and workable community forestry in Cambodia. Introduction of Non-timber forest products such as mushroom gathering, basket making honey collection is the most popular way to earn income from forests without cutting trees though, it may not sustain livelihood of local people especially around open forest area. Combination of income from fishing, aquaculture, and value-added agriculture such as processed foods will be effective to sustain livelihood without cutting trees for income. In order to introduce these into community forestry activities, communication with the other Administrations or Ministries to sustain livelihood of local people will also be the key for successful community forestry. Thus, it is necessary to enforce the importance of coordination and assistance for discussion and decision making among all the stakeholders in the community forestry procedure as well as administrative affairs. Besides these efforts, Forestry Administration should indicate the basic ideas or policies on the roles of local foresters, especially whether the forester's role involves assistance for communities such as decision making, consensus building, and awareness generation.

On the other hand, present procedure and it related sub-decree on community forestry in Cambodia have been established and introduced based on lesson learned from other experienced countries, and it was rarely reflected in historical/cultural background, laws and present status of Cambodia especially on community structure and forester's capacity. Further field studies should be conducted to review existing institutional mechanism of community forestry taking into account the social background of community as well as capacity of foresters. Narrowing the gap between the policy and reality of community forestry is also critical issue in Cambodia.

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