



## Factors Driving the Effectiveness of Community Fisheries Management Resulted from Fisheries Policy Reforms

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**Abstract** The fisheries policy reforms on co-management in Cambodia have been implemented for almost two decades, starting its first reform in 2000 and its second reform in 2012. These reforms had promoted the organization of 516 Community Fisheries (CFis) around the country. After two decades of the CFis operation, it is noteworthy to identify the driving factors that brought the functionality and effective operation of the CFi on co-management of the fisheries resources in Cambodia. The study aims to identify the different driving factors that led to the functionality and effective operation of the CFis co-management of the fisheries resources development and sustainability resulting in the improvement of food security and socio-economic status of the CFi members. To identify those factors, the study purposely selected 16 CFis among the 516 CFis and randomly interviewed 527 CFi members from these CFis. To support the quantitative information from the interviews, the study conducted 16 Focus Group Discussion (FGD) in the 16 selected CFis for validation and qualitative information. The results show that there are two key main factors influencing the functionality and effective operation of the CFis. First, according to 96% of the CFis members respondents and all FGDs respond, the legal framework that supports the process of CFi establishment and co-management of the fisheries resources have given them the legal rights and opportunity to use and sustain the fisheries resources. The legal frameworks supporting the CFis establishment includes the Royal Decree on the Establishment of CFi, the Sub-decree on CFi Management, and the amendments of Fisheries Law immediately after the reforms and the declaration on CFi Guideline. The second factor according to 93% of the total respondents and all 16 FGDs is the benefit of being a member of the CFi. Being a CFi member and small-scale fisher, they were given more access to the fishing ground, harvesting more fish for consumption and income that improve their socio-economic status, recognition of their value in participating in a co-management concept of governance, capacity building and working together as one and trusting each other. Aside from these influencing factors, challenges and lessons learnt were also documented for a brighter future of CFi co-management. These include the actions on the amendment of CFi legal framework particularly on the CFi economic creation and financial support for a functional and effective CFi co-management. This should include the expansion of CFi rights and roles on economic activities and benefits of being CFi member, which needs to be clearly defined in the Fisheries Law and CFi sub-decree amendment followed by the development of the CFi Guideline. The government, development partners and the private sector should

financially and technically support the CFis to function and operate effectively in co-managing the fisheries resources development and sustainability.

**Keywords** fisheries policy reform, community fisheries (CFi), CFi legal framework, benefits of CFi membership, fisheries management

## INTRODUCTION

Cambodia is endowed with rich natural fisheries resources in both freshwater fisheries from the Mekong Region and Tonle Sap Lake system, and the marine fisheries from the coastal region. Fish is one of the most important foods and necessities of life for a rice-fish-eating population, and potentially an important contributor to improve food security and nutritional status of the population. Therefore, the management of the fisheries resources is an important responsibility that requires development and improvement overtime according to its context, demands and needs that will occur. As the situation became unfavorable for subsistence farmers-fishers to get equal benefits from the natural fisheries resources, the government decided to reform the fisheries management in October 2000 by cancelling 56% of the fishing lots and providing to the public/fishers for communal use. Finally, in 2012 the government cancelled all remaining fishing lots (industry/large fishing scale) in the Great Lake as part of the deep reform of the government to sustain the fisheries resources and improve the socio-economic development of the communities in the rural areas. To support this reform, the government supports the small-scale fishers to organize Community Fisheries (CFi) to implement fisheries co-management with the government to develop and sustain the fisheries resources.

As a result of the fisheries policy reforms for almost two decades, the government was able to establish 516 CFi around the country. Witnessing the impacts of the reforms, it raises the question of what factors have driven the functionality and the effective operation of the CFi co-management that can be learned to improve CFi legal framework for the sustainability of the fisheries resource management in Cambodia.

**Table 1 List of CFi target study by province and region**

No.	CFi Name	Province	Region
1	CFi Kaoh Kaev	Kampong Chhnang	Tonle Sap Great Lake
2	CFi Kanlaeng Pe		
3	CFi Roha Suong	Battambang	
4	CFi Phneat Koh Pongsath	Bantheay Meanchey	
5	CFi Chong Khneas	Siem Reap	
6	CFi Samaki Kampong Kou	Kampong Thom	
7	CFi Samaki Akphyrak Stung Kombot		
8	CFi Beung Krapet	Tboung Khmom	Mekong
9	CFi Rokakoy	Kampong Cham	
10	CFi Chroy Check		
11	CFi Boeung Chulen	Kandal	
12	CFi Put Sar Cham Pei	Takeo	
13	CFi Kok Thlok		
14	CFi Trapeang Ropov	Kampot	Coastal
15	CFi Trapeang Sangke		
16	CFi Tumnub Rolok	Preah Sihanouk	

## METHODOLOGY

Sixteen (16) CFIs were purposely selected from the three regions (Tonle Sap, Mekong and Coastal region) based on the geographical fisheries ecosystem in Cambodia. The CFIs were organized and established in these three regions after the implementation of the fisheries reforms as shown in Figure 1 and table 1. A total of 527 CFI members (169 women, 32%) as respondents was randomly selected in the 16 CFi members’ list. Primary data was collected through a face-to-face interview with the 527 respondents using a structured questionnaire that was conducted in 2018. The 16 Focus Group Discussion (FGD) from the 16 CFIs was conducted in 2020 providing qualitative information to support the quantitative data from individual interviews. The 16 FGDs were facilitated with the CFI Committee (CFiC) members to get their views and perceptions about the factors driving CFI functionality, effective operation and identifying the strengths, weaknesses, opportunities and threats of each CFI using SWOT analysis. FGD data is mainly on qualitative analysis to substantiate the quantitative analysis with the multiple responses of CFI members on key indicators to understand the effects and causes of factors driving the functionality and effective operation of CFI management after the fisheries reforms in Cambodia.

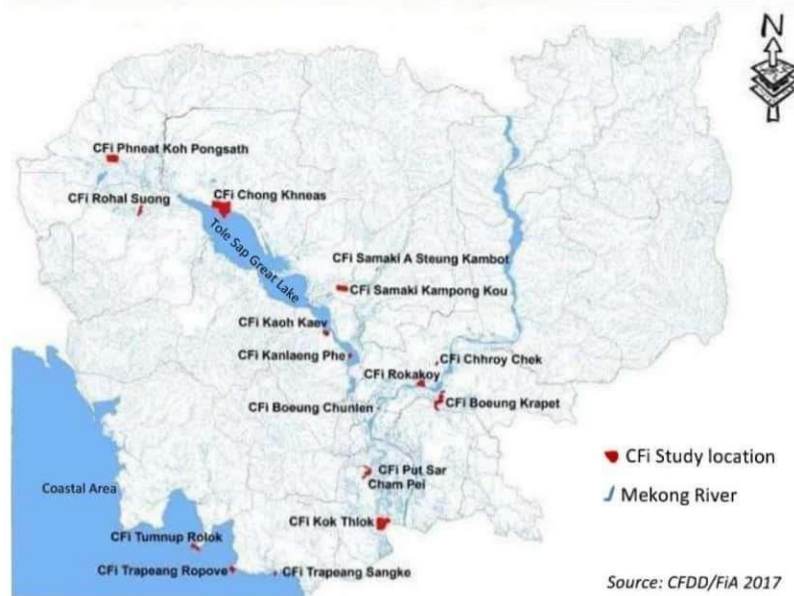


Fig. 1 Study sites location

Table 2 Factors driving CFI functionality and effectiveness CFI management

Factor*	Frequency	Percent
- CFI legal framework’s support	505	96
- CFI membership’s benefits	488	93
- Financial and technical support	475	90
- Collaboration and support and from local authorities	466	88
- Collaboration and support from technical agencies	443	84
- Collaboration and support from DP	433	82
- CFiC ability and capacity	339	64
- Participation of CFI members	321	61
- Others (people willingness, support and work together...)	303	57

\* Multiple responses

## RESULTS AND DISCUSSION

There were several key factors driving the functionality and effective operation of CFI co-management reported by the 527 representatives of CFI members and 16 CFI Committees as presented in Table 2. The factor with the highest percentage 96% of the total respondents is the provision of CFI legal framework to the community fisheries. The second important factor mentioned

with a total percentage of 93% of the CFi members respondents and all 16 Focus Group Discussion from CFi Committee is the benefits that they received being a member of the CFis. Moreover, other factors presented in Table 2 below are same important parameters that interlinked with the other factors that contributed to the functionality and effective operation of CFi co- management of the fisheries as a whole.

The results of the 16 Focus Group Discussion with CFi Committee members expressed their views that CFi legal framework and CFi members' benefit are the most key necessary factors driving the functionality and effective operation of CFi in their co-management of the fisheries resources. While the other factors are of equal importance contributing to the functionality and effective operation of CFi co-management of fisheries resources. The study explored the reasons for these two factors as presented in Tables 3-4 below.

**Table 3 Reason of CFi legal framework driven factor the CFi effective management**

Reason*	Frequency	Percent
- Legal guidance for CFi establishment	521	99
- Official and legal recognition of CFi	518	97
- Legal guidance for CFi function and management	502	95
- Official support from the government and development partners	467	89
- Fisher's rights and responsibility in the natural fisheries resources management	436	83
- Increased support and collaboration more than before CFi establishment	328	62
- Others (CFi empowerment, commitment and resource ownership)	311	59

\* Multiple responses

Table 3 presented the reasons why CFi legal framework is an effective driver for the CFi operation and co-management. Around 99% of all CFi member respondents and all CFiC Focus Group Discussion expressed that the legal framework had guided them to establish their CFi organization, this includes the Royal Decree on the Establishment of the Community Fisheries (Nor Sor/Ror Kor Tor/0505/240, 2005) for them to work closely with the government in managing and developing the fisheries resources. According to 97% of the CFi member respondents, the legal framework had been an instrument for them to be recognized by other stakeholders including development partners as an official and legal entity that co-managing the development of the fisheries resources. Around 95% of the CFi member respondents mentioned that the legal framework had provided a clear roles and responsibilities to the CFs including their mandates to function effectively in co-managing with the government the development and sustainability of the fisheries resource sustainability. The role and responsibility of the CFi are clearly indicated in the Sub-decree on CFi management (No. 25 OrNor Kror. BorKor, 2007). These three top reasons are inter-related and the main provision of the official and legal recognition of the Community Fisheries organization in the form of co-management approach that are financially and technically supported by the government and development partners according to 89% of CFi member respondents. Based on these legal frameworks the CFis were provided and promoted fisher groups' tenure rights, user rights, and rights to protect and co-manage their natural fisheries resources to develop and sustain in an effective way. The CFis legal recognition is also indicated in the amended Fisheries Law of 2006 as a result of the first fisheries reform in 2000, which never before in the history of fisheries resources management in the country. In article 59 of Chapter 11 on Community Fisheries of the Fisheries Law, stated that "all Cambodian citizens have the rights to form Community Fisheries in their own areas on a voluntary basis to take part in the sustainable management, conservation, development and use of the fishery resource". Therefore, the legal framework is an important legislation and key factor at the grass-root level and people can officially and legally form their Community Fisheries organization that legally provides their rights and responsibility in protecting and co-managing their natural

fisheries resources in an effective way. Moreover, this local community fisheries organizations have received substantial support and cooperation with the local authorities from all levels, development partners and private sector more than before when they do not have their CFi organization. Finally, the respondents also mentioned that the legal framework has empowered them socially and economically including mainstreaming of gender and fisheries resources ownership.

Table 4 shows the reasons why being a CFi membership benefits is a driving factor for the functionality and effective operation of the CFi in a co-management approach. According to 97% of the total CFi member respondents the benefits of being a CFi member is about building trust among each other, among villagers with other villagers, among fishers with other fishers, in particular for small-scale/family and poor fisher families. Another reason is the unification among the community fishers and working as a group and organizations and recognizing equity and rights to their fisheries resources, especially for the family scale fishers in the CFi fishing areas. According to 89% of the CFi member respondents after becoming members of the CFi they were provided more access to the CFi fishing ground that was previously fishing lots.

**Table 4 Reason of CFi membership benefits driven factor the CFi effective management**

Reason*	Frequency	Percent
- Building trust to each other (villagers and villagers) as united	518	97
- Being recognized as group work (work together)	502	95
- Equal rights for fishing by family scale	480	91
- Can do fishing (more access to fishing ground) more than before	467	89
- Their membership and participation being recognized and valued (resources ownership)	436	83
- Gaining knowledge on fisheries resource protection and management	388	74
- Building empowerment and capacity (from meeting, workshop...)	353	67
- Voices and demands can be addressed	321	61
- Received more support for social welfare and poverty alleviation	313	59
- Others (more safety than before, no stolen, no violence...)	301	57

\* Multiple responses

Other benefits of being a CFi members include; the official recognition and value from other stakeholders, the CFi builds trust and foster cooperation among the community which improve social and economic development within the community, the CFi members gain knowledge on how to protect and manage their natural fisheries resources in the effective and sustainable way, empowered and built capacity of individual member and fisher group through participating in meetings, workshops and trainings as well as other events taken place in the CFis area, the government and other stakeholders heard their voices and demands, and noted and addressed, being member , they receive more support for social welfare and help to alleviate their family poverty, and finally their living conditions have improved including security, violence, gender, and child labor were taken into high consideration in the CFi.

However, there are still challenges that the CFis are facing as presented in Table 5, these include generation of income or finance that will support the CFi operation especially the co-management activities for the development of the fisheries resources. The CFi respondents expressed that the CFi legal framework should have a section that articulates the possible sources of income for CFi in order to generate their own income or finance in a collective way to effectively function and operate their activities for the conservation of the fisheries resources and help their CFi members on their social welfare and poverty alleviation. Another challenge that was ranked high is the limited benefits of some CFi members regarding their rights for fishing in the CFi fishing areas because outsiders could

still encroach and fish in CFi fishing areas. They suggested that the CFi legal framework should consider defining the differences between the fishing rights of the CFi members and outsiders then support the implementation of control and surveillance of these outsiders. They further suggest that CFi members should have all the rights in doing fishing freely in the CFi fishing area, while non-CFi members and outsiders should pay fishing fee according to the legal fishing gears used, which need to be defined clearly and effectively applied based on the CFi by-law and regulation. Other key challenges are also important areas for improvement, which require actions accordingly.

**Table 5 Key challenges facing the CFi effective management**

Key challenges**	Ranking
- Lacking of CFi self-financial support and generation	1
- Still limited benefits for being CFi members regarding with rights for fishing, everyone can do small-scale fishing in CFi area	2
- Limited financial support for CFi operation and functioning from the state and development partners	3
- 5 years of CFi Area Agreement is short, which could not enough to produce tangible impacts of CFi development and management	4
- Poor enforcement of CFi by-laws and internal rules by members and non-members in CFi villages	5
- Poor implementation of CFi Area Management Plan due to budget lacked	6
- CFi Committee (CFi leader team) capacity is still limited, leading to take poor rules and responsibilities, and affectively poor CFi function and management	7
- Still limitation support from local authorities	8
- Limitation of technical support and follow up by technical agencies	9
- Local people's awareness on CFi legislation/legal framework is still limited	10

\*\* Results of FGD

## CONCLUSION

Community Fisheries is a voluntary fisher organization in Cambodia, which is officially established and legally recognized by the state with the provision of suitable legal framework, which never before in the history of fisheries management in Cambodia. It is a prime objective and achievement of the Governments' fisheries reforms, in 2000 and in 2012, to ensure that the local fisher communities and small-scale fishers can obtain access to the fisheries resources for food, livelihood and poverty alleviation. The achievements and results produced after the fisheries reforms are due to the support of the legal framework for CFi that was provided at the right time and direction. Through these CFi legal frameworks, the small-scale and poor fishers are receiving benefits and rights to share their roles and responsibilities for the co-management of their natural fisheries resources for development and sustainability. These are the most important factors that guide and drive the functionality and effective operation of the CFIs. However, there are still key areas that are facing challenges for the CFIs to be more functional and effective in co-management of the fisheries resources in the long run, which included the improvement of CFi legal framework. The CFi respondents recommended the improvement of the legal framework to consider the provision of guiding the CFi to generate income to self-finance their activities, suitable fisheries related livelihoods, and harvesting their resources. Finally, the CFIs recommended to define clearly the rights of the CFi members and non-members/outside in fishing in the CFi fishing areas. They suggest that they should be given higher benefits for being a CFi members as well as CFi committee members as prime incentives for their participation and efforts to actively protect and co-manage the natural fisheries resources development in an effective and sustainable manner.

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