

KINGDOM OF CAMBODIA

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MINISTRY OF AGRICULTURE, FORESTRY AND FISHERIES

FISHERIES ADMINISTRATION



**Mekong Integrated Water Resources Management Project
Phase III – Component 1**

TECHNICAL REPORTS

Definition of fully functional Community Fisheries



2018

Inland Fisheries Research and Development Institute

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1. INTRODUCTION

Within the project “Mekong Integrated Water Resources Management Phase III (M-IWRM III, 2016-2020)”, Component 1 is focused on “Support for Fisheries and Aquatic Resources Management in Northern Cambodia”. One of its main objectives in relation to the development of community fisheries (CFi) is to promote cooperation, and assist the CFi having the best potential to become fully functional by the end of the project.

The term “fully functional” is important, and refers to the fact, acknowledged in multiple studies and reviews (Leng Sy Vann 2005, Resurreccion 2006, Kurien et al. 2006, Ratner 2006, Blomley et al. 2010, Ratner 2017) that despite a fully completed registration process, a number of community fisheries face contextual, structural, or organizational challenges, and are not necessarily operational or fully functional.

It has been observed that in order for CFs to be organized successfully, support from the Fisheries Administration (FiA, formerly The Department of Fisheries) is generally required.

Ly Vuthy et al. (2006)

Despite significant achievements, Community Fisheries are faced with significant challenges. Experience shows that these structures can function well with support from external organizations or donors, but without such support they are prone to failing. This can be attributed to several factors, including, i) the limited capacity of CFi members, ii) the lack of a proper source of income for CFi committees to carry out their activities, and iii) the lack of personal incentives for CFi members to actively participate in management activities.

Baran et al. (2014)

In the present report, we review the possible criteria for fully functional CFi in Cambodia. These criteria reflect the fisheries co-management literature but also the experience of multiple CFI practitioners, with several elements specific to the country and its legislation. In the annex, a sheet for CFI assessment is also proposed.

2. GUIDING PRINCIPLES

In the “Results framework and monitoring” section of the M-IWRM III project appraisal, the project considers CFi as fully functional if five criteria are met:

- i. the CFi is officially recognized and registered as specified by Cambodian law;
- ii. The CFi management plan is approved by FiA;
- iii. boundaries of area under CFi responsibility are physically demarcated;
- iv. the CFi is budgeted and staffed according to plans; and
- v. fishing regulations in the CFi management plans are enforced.

These elements are central to our definition of fully functional CFi, but are also complemented with additional aspects detailed below.

In 2001, Pomeroy *et al.* identified in a global review eighteen factors affecting the success of fisheries co-management in Asia. These conditions pertain to three different levels: supra-community level, community level, and individual and household level. The definition of fully functional community fisheries below reflects these factors and scales, going beyond the sole scale of community fisheries.

In Cambodia, Ly Vuthy *et al.* (2006) identified key factors qualifying community fisheries management as functional and successful:

- the active participation, interest and commitment of local villagers and CF members;
- stakeholder collaboration and networking that begins with a partnership between the CF committee and the village and commune council;
- simple practical field strategies like establishing self-help groups.

However, a recent review of conceptual frameworks for fisheries co-management proposed since 1989 (Khin Maung Soe *et al.* 2017) shows that most frameworks tend to focus on **governance** (i.e. how people organize themselves), and that only few frameworks, mostly posterior to 2000, include **management of the resource base** (i.e. technical interventions actions on the environment and the resource base). As pointed by the authors, *“community fisheries’ practical interventions focused on the resource base and aimed at ensuring its sustainability, such as closed fishing seasons, gear restrictions, species or size restrictions, protected areas [...] seem to receive limited attention in most community-based fisheries co-management manuals and guidelines”*.

In an attempt to correct that bias, Graham *et al.*’s framework (2006) covers access rights, compliance and enforcement, economic development and conflict management, but also fisheries management planning, harvest management and research. More recently, Evans *et al.*’s review meta-analysis of co-management (2011) distinguishes 26 process indicators and 14 outcome indicators, combining both organizational and environmental aspects. This includes governance indicators (participation, access to resources, compliance to rules and conflict avoidance, etc.), but also resource well-being, fishery yield, household income, and household well-being.

3. INDICATORS RELEVANT AND MEASURABLE IN CAMBODIA

Projects trying improve the actual functioning and outcomes of community fisheries are faced with the challenge of monitoring a few key factors that reflect the above components, while remaining measurable and doable within a given time frame and budget. These indicators must be SMART, i.e. specific, measurable, achievable, relevant and time-bound.

In their interdisciplinary multivariate analysis of adaptive co-management and corresponding models, Halls et al. (2002) identify 116 attributes (i.e. variables), either:

- system descriptors,
 - o in particular fisher/stakeholder/community characteristics, decision-making arrangements
- or outcomes descriptors:
 - o production/yield, sustainability/biodiversity, wellbeing, institutional performance, institutional sustainability

This is probably the most comprehensive identification of the factors linked to co-management in fisheries, but in the case of Cambodia and of the present project, it is not feasible nor cost effective to use so many variables to identify fully functional CFi. Thus, the most detailed assessment to date, done by CFDD at FiA, was discontinued because of cost and operationalization issues.

Furthermore, in the national context characterized by a focus on the CFi steps and criteria inherent to the *Sub-decree on Community Fisheries management* (RGC 2005), an important emphasis should be put on the criteria of the institutional frameworks.

We review below the descriptors of “functional CFi” that can be assessed using a household questionnaire. Such questionnaire focuses mainly on CFi structure and operation, and on CFi-related benefits and challenges as perceived by the interviewees. For a full assessment of environmental benefits in relation to CFi development, this approach is to be complemented with a biological assessment of fish catches and biodiversity.

4. CRITERIA FOR FULLY FUNCTIONAL COMMUNITY FISHERIES IN CAMBODIA

Criteria for fully functional CFI in Cambodia can be summarized below:

The CFI *can* operate

- The establishment process is complete

- The full structure is in place

The CFI *does* operate

- The Community Fishery Committee is active

- Management tools are in place

 - There are tools for fisheries management

 - There are tools to protect the resource

 - There are tools to manage conflicts

The CFI gets results

- Illegal fishing is addressed

- The CFI protects the resource

- Conflicts are addressed

CFI members are positive about the CFI

- Corruption and transparency are not an issue

- CFI operation is fair

- Gender and ethnicity aspects have been integrated

- The CFI is considered useful

In the review of functionality descriptors below, we also use three criteria indicating how important each descriptor is in the assessment.

[Essential]: if the criterion is not met in a given CFI, that CFI will not be considered fully functional;

[Important]: if the criterion is not met in a given CFI, the corresponding issue will be flagged as a priority to be addressed in the course of the project;

[Desirable]: this corresponds to criteria for which a positive answer is desirable, and that can be used for rating CFI.

4.1 The CFi can operate

4.1.1 The establishment process is complete

- There has been registration and recognition of the CFi by the government **[Essential]**
- The government has provided technical support to the establishment of the CFi **[Important]**
but not [Essential] since establishment could be completed without government's assistance

4.1.2 The full structure is in place

- The CFi includes a Community Fishery Committee **[Essential]**
- There are CFi by-laws and internal rules **[Essential]**
- Mapping of the Community Fishing Area has been completed and boundaries demarcated **[Essential]**
- There is a Community Fishing Area Agreement **[Essential]**
- There is a Community Fishing Area Management Plan approved by the FiA **[Essential]**
- There is a basic understanding among CFi members about the purpose and operation of the CFi **[Important]**
- The CFi members are involved in developing fisheries management rules and regulations. **[Important]**
- The CFi has sustainable financing to operate **[Important]**
This point should be [Essential] but is actually quite challenging for all CFi, given the sources of funding available.

4.2 The CFi does operate

4.2.1 The Community Fishery Committee is active

- The CFC manages finances **[Essential]**
- The CFC coordinates with the Commune Council or the FiA Cantonment **[Essential]**
- The CFC meets with members on a regular basis **[Important]**
but not [Essential] since a level of management can be achieved without extensive consultations
- The CFC reports illegal fishing to the Fisheries Cantonment **[Important]**
- Decision-making by and leadership in the CFC are accountable and transparent **[Important]**
- The CFC engage in community development projects **[Important]**
- The CFC develops networks with other CFi and organizations **[Desirable]**
- The CFC offers training and capacity building to members **[Desirable]**

4.2.2 Management tools are in place

THERE ARE TOOLS FOR FISHERY MANAGEMENT

- There are rules and regulations for fisheries management [**Essential**]
- The CFI has an activity plan for the next six months [**Important**]

THERE ARE TOOLS TO PROTECT THE RESOURCE

- The CFI has a conservation area [**Important**]
- The CFI has rules and regulations against illegal fishing [**Important**]
- The CFI knows what to do when illegal fishers are caught [**Important**]
In principle [Essential], but actually many CFI do not know what to do because of a policy gap or because of corruption / laissez-faire among authorities

THERE ARE TOOLS TO MANAGE CONFLICTS

- The CFI has a conflict management mechanism [**Important**]

4.3 The CFI gets results

ILLEGAL FISHING IS ADDRESSED

- The CFI does regular patrolling against illegal fishing [**Essential**]
- CFI members feel that the Community Fishery Committee works to reduce illegal fishing [**Important**]
- There is enforcement of the rules and regulations against illegal fishing [**Important**]
This point should be Essential but is actually quite challenging for all CFI, given issues highlighted above
- CFI members consider that illegal activities have remained stable or have decreased over one year [**Important**]

THE CFI PROTECTS THE RESOURCE

- CFI members feel that the conservation area is useful for the fishery and provides benefits to their community [**Important**]

CONFLICTS ARE ADDRESSED

- CFI members feel that the CFI helps to resolve conflict in the fisheries [**Desirable**]
- CFI members feel that the CFC acts quickly enough to resolving conflicts on fisheries related issues [**Desirable**]

4.4 CFi members are positive about the CFi

CORRUPTION AND TRANSPARENCY ARE NOT AN ISSUE

- CFi members consider that corruption is not an issue within the CFC **[Important]**
- CFi members feel that elections for the CFC were/are open to everyone **[Important]**
- Finances (income and expenditures) of the CFi are available for all members to examine **[Important]**

CFI OPERATION IS FAIR

- CFi members feel that their participation to the CFi operation is satisfactory **[Important]**
- CFi members feel that access rights to fisheries are allocated fairly **[Important]**

GENDER AND ETHNICITY HAVE BEEN INTEGRATED

- The number of indigenous people members among the CFC reflects their groups in the community **[Essential]**
- The number of female members among the CFi reflects inclusion of women **[Essential]**
- Women and indigenous people participate actively in CFi activities **[Important]**
- The number of female members in the CFC reflects inclusion of women **[Important]**
In principle [Essential], but women might not want to join, as in some cases it can be at the expense of women (Resurreccion 2006)
- The CFC engages with women in the community **[Important]**
Women's involvement within the CFi is [Essential], women's involvement by the CFC in the whole community is only [Important]

THE CFI IS CONSIDERED USEFUL

- CFi members feel that their access to the fisheries has improved as a member of the CFi **[Important]**
Not [Essential] because we do not know what the access rights were before CFi establishment
- CFi members think that being a member of the CFi has benefited them socially and economically more than being alone **[Important]**
- CFi members feel that the CFi has improved the fish stock in the area **[Important]**
In principle [Essential] but fish stock is also subject to pressure outside the CFi (pollution, dams upstream, etc.)
- CFi members feel that the condition of the fish resource is stable or has improved thanks to management **[Important]**
- CFi members expect the fishery to maintain its current level of productivity over the next 5 years **[Important]**
- CFi members feel that the CFi has improved fish habitats (wetlands, inundated forests) in the area **[Important]**
- CFi members do not worry that their household would not have enough food or have to cut on portions / quality **[Desirable]**

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6. ANNEX: CFI ASSESSMENT SHEET

		<i>Status in the target CFI</i>		
	<i>Expectation</i>	<i>Yes</i>	<i>Somehow</i>	<i>No</i>
1. THE CFI CAN OPERATE				
1.1. The establishment process is complete				
The government has provided technical support to the establishment of the CFI	Important			
There has been registration and recognition of the CFI by the government	Essential			
1.2. The full structure is in place				
The CFI includes a Community Fisheries Committee	Essential			
There are CFI by-laws and internal rules	Essential			
Mapping of the community fishing area has been completed and boundaries demarcated	Essential			
There is a Community Fishery Area Agreement	Essential			
There is a basic understanding among CFI members about the purpose and operation of CFI	Important			
The CFI members are involved in developing fisheries management rules and regulations	Important			
The CFI has sustainable financing to operate	Important			
There is a Community Fishery Area Management Plan approved by the FiA	Essential			
2. THE CFI DOES OPERATE				
2.1. The CFC is active				
The CFC manages finances	Essential			
The CFC coordinates with the Commune Council and/or the Fisheries Cantonment	Essential			
The CFC meets with members on a regular basis	Important			
The CFC reports illegal fishing to the Fisheries Cantonment	Important			
Decision-making by and leadership in the CFC are accountable and transparent	Important			
The CFC engage in community development projects	Important			
The CFC develops networks with other CFI and organizations	Desirable			
The CFC coordinates training and capacity building to members	Desirable			

2.2. Management tools are in place				
<i>2.2.1. There are tools for fisheries management</i>				
There are rules and regulations for fisheries management	Essential			
The CFI has an activity plan for the next six months	Important			
<i>2.2.2. There are tools to protect the resource</i>				
The CFI has a conservation area	Important			
CFI has rules and regulations against illegal fishing	Important			
The CFI knows what to do when illegal fishers are caught	Important			
<i>2.2.3. There are tools to manage conflicts</i>				
The CFI has a conflict management mechanism	Important			
3. THE CFI GETS THE RESULTS				
3.1. Illegal fishing is addressed				
The CFI does patrolling against illegal fishing	Essential			
CFI members feel that the Community Fisheries Committee works to reduce illegal fishing	Important			
There is enforcement of the rules and regulations against illegal fishing	Important			
CFI members consider that illegal activities have remained stable or have decreased over one year ago	Important			
3.2. The CFI protects the resource				
CFI members feel that the conservation area is useful for the fishery, and provides benefits to their community	Important			
3.3. Conflict are addressed				
CFI members feel that the CFC helps to resolve conflict in the fisheries	Desirable			
CFI members feel that the CFC acts quickly enough to resolving conflicts on fisheries related issues	Desirable			
4. CFI members are positive about the CFI				
4.1. Corruption and transparency are not an issue				
CFI members consider that corruption is not an issue within the CFC	Important			
CFI members feel that elections for the CFC were/are open to everyone	Important			
Finances (income and expenditures) of the CFI are available for all members to examine	Important			

4.2. CFi operation is fair				
CFi members feel that their participation to the CFi operation is satisfactory	Important			
CFi members feel that access rights to the fishery are allocated fairly	Important			
4.3. Gender and ethnicity have been integrated				
The number of indigenous people members among the CFC reflects their groups in the community	Essential			
The number of female members among the CFi reflects inclusion of women	Essential			
Women and indigenous people participate actively in CFi activities	Important			
The number of female members in the CFi Committee reflects inclusion of women	Important			
The CFC engages with women in the community	Important			
4.4. The CFi is considered useful				
CFi members feel that their access to the fisheries has improved as a member of the CFi	Important			
CFi members think that being a member of the CFi has benefited them socially and economically more than being alone	Important			
CFi members feel that the CFi has improved the fish stock in the area	Important			
CFi members feel that the condition of the fish resource is stable or has improved thanks to management	Important			
CFi members expect the fishery to maintain its current level of productivity over the next 5 years	Important			
CFi members feel that the CFi has improved the habitats (wetlands, inundated forests) for fish in the area	Important			
CFi members do not worry that their household would not have enough food or have to cut on portions / quality	Desirable			

Background

The project “Mekong Integrated Water Resources Management - Phase III” is funded by the World Bank. The objective of this project is to establish the foundation for effective water resource and fisheries management in the northeast of Cambodia.

Within this project, Component 1 (Fisheries and aquatic resources management in Northern Cambodia) is executed by the Fisheries Administration and implemented by the Inland Fisheries Research and Development Institute. The objective of this component is to improve the management of fish and aquatic resources in selected areas in Kratie and Stung Treng provinces.