

WorldFish–Greater Mekong Regional Office

Rice Field Fisheries Enhancement Project (RFFEP)

ID Number: N1181CAPE

Final Evaluation Report



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PROJECT IMPLEMENTED BY:



Improving aquatic biodiversity and production for better livelihoods

LIST OF ACRONYMS AND ABBREVIATIONS

ANKO	Aphiwat Neary Khmer Organization
CBO	Community-Based Organization
CFR	Community Fish Refuge
CC	Commune Council
CCM	Catch and Consumption Survey
CDP	Commune Development Plan
CIP	Commune Investment Program
CMDG	Cambodia's Millennium Development Goals
COWS	Cambodian Organization for Women Support
D&D	Decentralization and De-concentration
EU	European Union
FAO	Food and Agriculture Organization of the United Nations
FiA	Fisheries Administration
FiAC	Fisheries Administrative Cantonment
FGD	Focus Group Discussion
FL	Fisheries Law
HH	Household
HS	Highly Satisfactory
IEC	Information, Education and Communication
KII	Key Informant Interview
LA	Local Authority
MAFF	Ministry of Agriculture, Forestry and Fisheries
MDG	Millennium Development Goals
NGO	Non-Governmental Organizations
NSDP	National Strategic Development Plan
NREM	Natural Resources and Environment Management
NRM	Natural Resource Management
OAA	Other Aquatic Animal
REFEP	Rice Field Fisheries Enhancement Project
USAID	United State Agency for International Development
VSG	Village Support Group
SHG	Self-Help Group
TCO	Trailblazer Cambodia Organization
ToR	Terms of Reference
ToT	Training of Trainer

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We thank the staff of the FiA at the national level and local levels for their cooperation and perspectives, and appreciate the interest in the final evaluation. Last but not least, we are grateful to the communities for their time, thoughts and hospitality.

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Figure #1: RFFEP/CFR Target Provinces

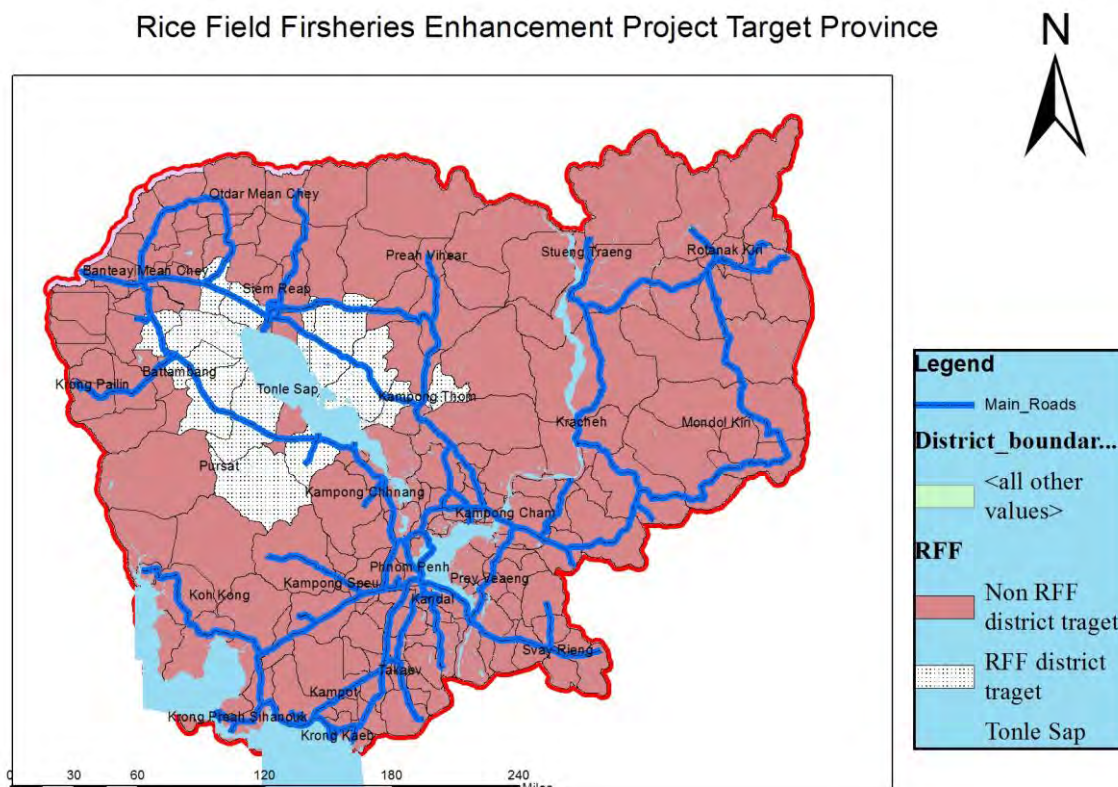


Table #1: Project CFR Targets

Province	District	Commune	CFR Name
Battambang	Aek phnom	Preaek Luong	Boeng Diaphtoul
		Moung Ruessei	Ka Kaoh
	Sangkae	Prey Touch	Ang Chork
		<u>Robas Mongkol</u>	Anlos Dong
		Kampong Prieng	Beong Krong
		Thma Koul	Anlong Run
Kampong Thom	Kampong Svay	Ou Ta Ki	Ou Ta Ki
		Kampong Svay	Enteak Kuma
		San Kor	Krasaing Rithy
		Tbaeng	Bakong
		Trapeang Ruessei	Boeng Kamhengsa
			Boeng Thea
	Prasat Sambour	O Bosmakak	
		Sambour	Boeng Prahauich
	Stoung	Tang Krasau	Boeng Rolum
		Pralay	Trapaing Thlok
Chamna Kraom		Meanchey	

			Preas Neang Korl
			Trapeang Neang Noy
Pursat	Bakan	Boeng Bat Kandaol	Boeng Tramses
		Rumlech	Boeng Rumlech
		Snam Preah	Aren
			Boeng Tramper
	Krakor	<u>Boeng Kantuot</u>	<u>Boeng Kantuot</u>
		<u>Kbal Trach</u>	Kuch Noub
		<u>Sna Ansa</u>	Damnak Kranh
	Phnum Kravanh	<u>Prongil</u>	Boeng Kampeng
		<u>Phteah Rung</u>	Boeng Preah Ponley
		<u>Santreae</u>	Boeng Cheutrav
Siem Reap	Chi Kraeng	<u>Kouk Thlok Leu</u>	Tumnuh Mkak
		<u>Spean Tnaot</u>	Trapaing Veng
		<u>Pongro Leu</u>	Tomnuh Kandole
	Kralanh	Kralanh	Otamoan
		<u>Sranal</u>	Kok Lhong
			Othom Sranal
		<u>Ta An</u>	Pur Sdey
		<u>Ta An</u>	Boeng Thmor Koul
	Puok	<u>Prey Chruk</u>	Lboeuk Keteyuos
	Soutr Nikom	<u>Chan Sa</u>	Trapaing Thlong
		<u>Dan Run</u>	Trapaing Kuy
		<u>Khmar Pou</u>	Tumnuh Romdeng

EXECUTIVE SUMAMRY

WorldFish – Greater Mekong Regional Office (Cambodia) has been funded under the United States Agency for International Development (USAID) for implementation of its Rice Field Fisheries Enhancement Project (EFFEP) under the Grant Agreement Project Number: N1181CAPE for a four-year period from April 1 2012 – 17 April 2016.

The total number of the project beneficiaries across 40 CFR sites estimated at over 18,377 households and/or 86,372 people in 4 provinces (Pursat, Battambang, Siem Reap and Kampong Thom).

The general objective – Develop improved sustainable rice field fishery management practices mainly for poor aquatic resource dependent households.

WorldFish Cambodia contracted a team of consultants to conduct the End of Project Evaluation. This evaluation aims to give more creditability for people outside the project on the findings and avoid bias, and to give project team gain more certain evaluation skills and knowledge that internal team may not have, and to explore a wider range of issue, lessons learnt and practices that would be useful for future project implementation.

This evaluation report was drawn mainly from quantitative and qualitative data sources, which were agreed upon, by the evaluation team and WorldFish/RFFEP National Project Coordinator. Data were collected from the following sources: (1) Baseline survey and End-line Survey; (2) Interviews (FGDs and KIIs); (3) Project staff interviews; and (4) Project reports, work plan and other project documentation. The findings were triangulated through the use of multiple sources of information. The evaluation was conducted through review of documents, meetings with project team and government institutions at the national and sub-national levels and field visits to the three districts of 20 CFR sites among 40 CFR sites. As a result, 304 informants (interviewees) in total were surveyed for the evaluation. *(A list of those interviewed is in Annex VII).*

Relevance: In terms of its relevance, the project is deemed to have been **Highly Satisfactory (HS)** because the project appropriately responds to the current national priorities of termed intervention and conservation agreement between the government, communities and WorldFish by providing incentives to the community for maintaining the standing fisheries under MAFF/Fishery Law, MAFF/FiA Strategic Plan 2010-2019, and MAFF Climate Change Action Plan in Agricultural Sector 2014-2018) of the RGC.

Efficiency: The evaluators' finds that in terms of efficiency the project was **Satisfactory (S)** due to it having helped communities in solving malnutrition, built a strong relationship and alliance with the local government technical agencies (FiA and FiAC) and LAs and especially with the communities, effectively mobilizing support to build the capacity of the community to participate in the intervention of the CFRs.

Effectiveness: The RFFEP effectiveness is **Satisfactory (S)**: The project has made significant achievements in establishing CFRs contributing the ecological functions and the governance of existing CFRs, fish productivity per hectare of rice field increased, micronutrient rice fish consumed at home increased, fundraising mobilized and managed. The fund also provided support in strengthening the patrol works. The project also used

biological monitoring survey, catch consumption monitoring survey, livelihood survey, and effectiveness of rice field refuge pond and effectiveness of CFR committees/members capacity building, etc.

Potential Impacts: Initial impact performance for the project is *Satisfactory (S)*. The communities have observed changes in improving the households' income and fish consumptions, RFF constituted a vital source of nutrition and food security for local people. To some extent, the income resulted from the interventions of the fish resources. There is clear evidence that the fish productivities in CFR have made a significant contribution to the income of the local people. This project has reduced illegal activities and resulted in the confiscation of tools or equipment used for illegal.

Sustainability: The evaluators' finds that sustainability was *Highly Satisfactory (HS)*. The local communities and community leaders base this on the support of the project. They expressed strong support and willingness to prolong the activities of the project. The involved communities have the capacity and the resources needed to keep CFR going. In particular it has developed a self-sustaining financial mechanism in order to fund fish guard activities and monitoring activities to ensure the sustainable of fish sources. Although the other copies the project concepts organizations and government agencies, there are the high probabilities that the project will support using some of the assessment tools benefits hence the sustainability of the CFRs.

Key Recommendations: Based on the evaluation, we recommend the followings:

- ✓ Capacity building to the local implementers and community needs to be continued.
- ✓ Link project activities with CIP/CDPs – RFFEP's continued supports will be needed to encourage communities, committees and LAs to include food security, nutrition and NREM activities in CIP/CDP.
- ✓ Link CFR activities with home gardening and/or lake gardening – this project showed clear evidences on adaption to drought through constructing water harvesting structure to keep the water for year round and fish sustainable.
- ✓ Consider the Model of Community-Based Natural Resource Management:
 - *Dialogue about the appropriate size (specifically for enabling protection and management of key livelihood resources, such as type of fishes, OAA, etc.) which community's feel they could manage.*
 - *Discussion and dialogue about seasonal community protected areas to allow for local management of key resources in core, protected and sustainable use zones.*
 - *Discussion and dialogue around the LAs and line- roles in collaborating with CFRs and with networks of CFRs.*
- ✓ To address their challenges will mean working more closely with other line-ministries, LAs and with neighboring countries to address cross-sectoral and train boundary issues.

1- INTRODUCTION AND BACKGROUND

The RFF of Cambodia are extensive covering a large part of the country in practically all areas where rice is cultivated. The importance of fish and other aquatic animals varies according to the typology of the rice field fisheries, supply (e.g. lake and major rivers) and demand or 'need' for fish as a source of animal protein. The rice field environment supports a diverse ecosystem of aquatic flora and fauna, rapidly expanding across the flooded rice fields during the onset of the rains which according to one study provides in one year around 40 kg of fish for consumption per capita¹.

CFRs require management by local communities to ensure the demarcated areas are not fished illegally. The success of this type of conservation management varies from place to place but in general suffers from 'management malaise' as communities are often unable to perceive the linkage between CFRs and fish productivity benefit across wide areas of rice fields, and potential benefits from enhanced management approaches and design specifications of CFRs tailored for various local conditions, are largely unknown. Furthermore, little is known about the ecosystem dynamics and inter-relationships of the three main system domains; CFR, connecting channels and rice fields.

The natural supply of fish and other aquatic animals from rice fields is a very important contribution to household food economics and to the potential nutritional well-being of many rural people. Therefore, maintaining this supply, or even increasing total supply to meet the growing population, captures the attention of government policies and strategies.

WorldFish – Greater Mekong Regional Office (Cambodia) has been funded under the United States Agency for International Development (USAID) for implementation of its ***Rice Field Fisheries Enhancement Project (EFFEP)*** under the Grant Agreement Project Number: N1181CAPE for a four-year period from April 1 2012 – 17 April 2016. The project has been jointly implemented by four (4) organizations such as:

- ✓ *WorldFish – Greater Mekong Office implementing its activities in national level;*
- ✓ *Cambodian Organization for Women Support (COWS) implementing its activities in Kampong Thom Province;*
- ✓ *Trailblazer Cambodia Organization (TCO) implementing its activities in Siem Reap Province;*
- ✓ *Village Support Group (VSG) implementing its activities in Battambang Province;*
and
- ✓ *Aphiwat Neary Khmer Organization (ANKO) implementing its activities in Pursat Province.*

The project has identified approximately 100,000 people in 4 provinces (Pursat, Battambang, Siem Reap and Kampong Thom).

General Objective and Specific Objectives of the Project

¹ MRC on an Introduction to Cambodia's Inland Fisheries Report, dated: Nov 2004;

The general objective – Develop improved sustainable rice field fishery management practices mainly for poor aquatic resource dependent households.

The specific objectives:

- ✓ *The dynamics of rice field fisheries systems and impacts of improved management practices are more clearly understood; and*
- ✓ *Improved management practices of RFF systems are adopted by CFR development program led by FiA, and also adopted by other agencies extending improved management of aquatic agricultural systems.*

The objectives will be achieved through three main outputs:

- ✓ ***Expected Output 1:** Existing rice field fisheries environments and management approaches fully characterized and up to 5 categories of rice field fishery systems described (20% emphasis).*
- ✓ ***Expected Output 2:** Best practice and most promising rice field fisheries enhancement models validated for future scale out (60% emphasis).*
- ✓ ***Expected Output 3:** Best practices in rice field fisheries enhancement for broader adoption promoted for scale out by the government and development agencies (20% emphasis).*

1.1 Objectives of the Evaluation

The context and objectives of the End of Final Evaluation are set out in the ToR, (*Annex I*). The objectives are:

- ✓ *To give more creditability for people outside the project on the findings and avoid bias; and*
- ✓ *To give project team gain more certain evaluation skills and knowledge that internal team may not have, and iii) to explore a wider range of issue, lessons learnt and practices that would be useful for future project implementation.*

1.2 Scope of the Evaluation

The main duties of the Consultant Team in contributing to the achievement of these objectives of the End of Project Evaluation will be:

1.2.1 Relevance

- Is there any good fit between the project’s intervention and the National Strategic Development Plan (NSDP), MAFF and FIA strategic plan 2010-2019 which are the key instruments for Cambodia in seeking to achieve the Cambodia’s Millennium Development Goals?
- Do rice field fisheries contribute to address the needs of the target communities (men and women)?
- Do people consume more fish from rice field system?
- Do people use water in the way was designed for improving fish productivities in CFRs and other agriculture purposes?
- Who get more benefit from this project?

1.2.2 Economy and Efficiency

Efficiency can be judged by comparing actual achievements with the section of the log-frame of the project and input, activity implementation and monitoring system management for this project as well as benefit of the project to target community people especially for the poor and vulnerable group.

1.2.3 Effectiveness

Project effectiveness can be judged by assessing progress towards the achievement of the specific objective set out in the log-frame. Moreover, the following question can be asked:

- Do the project interventions improve rice field fisheries productivities?
- Do project interventions improve the capacity of CFR committee on governance of CFR and rice field fisheries system? If yes, in what ways? If not why is does?
- Do project interventions give an opportunity for female leadership?

1.2.4 Impact

The overall objective of the project is to support the achievement of Cambodia's MDG 1 (eradicate extreme poverty and hunger) through improving fish production in rice field system. Do interventions contribute to improve household income and food securities? Who are the most beneficiaries?

1.2.5 Sustainability

In assessing impact sustainability consideration must be given to four factors:

- *Finance*. Is there a reliable mechanism to generate enough money to maintain the rice field fishery management and benefit?
- *Ownership*. Do the beneficiaries (men and women) and other stakeholders value the benefit and want to maintain it?
- *Project to Policy Links*. Is there an official policy, if necessary, which recognizes and implements the processes and maintains the institutions, needed to maintain the benefits?
- *Community institutional capacity*. Do the necessary community institutions exist and do they have adequate capacity to survive without external support?

(Source: ToR)

The evaluators were contracted for a period from March 7, 2016 to April 7, 2016 by using both primary data and secondary data information sources and first-hand visit work data.

1.3 Approach and Methodology

The Project Final Evaluation was carried out by an independent evaluation consulted, appointed by WorldFish – Greater Mekong Regional Office/RFFEP, and four (4) local NGO partner staff who supported the evaluators by providing information about local context such as institutions, protocol and traditions, etc.

1.3.1 Desk Review

Before the valuation field visit, a desk review was carried out with of relevant materials, including the project documents, work plans, progress reports for updated status sheet on monitoring of outputs provided and additional source of information, making it possible to have independent check on some of the findings in the surveys together with baseline survey report for comparing before and after project situations as well as relevant materials from secondary sources. *The list of documents and materials reviewed for Final Project Evaluation is outlined with (Annex VII).*

Typically, these documents were used to evaluate the project implementation against the DAC² Five Key Criteria—*i.e. relevance, efficiency, effectiveness, potential impact and sustainability*.

- ✓ **Relevance:** The extent to which the project activity is suited to the priorities and policies of the target group and to the effective disclosure public information at national and sub-national government levels.
- ✓ **Efficiency:** Efficiency measures the outputs -- qualitative and quantitative – in relation to the inputs.
- ✓ **Effectiveness:** A measure of the extent to which the expected outcomes and objectives of the project achieved.
- ✓ **Impact:** The positive and negative changes produced by a development intervention, directly or indirectly, and intended or unintended.
- ✓ **Sustainability:** Sustainability is concerned with measuring whether the benefits of an activity are likely to continue after donor funding has been withdrawn.

1.3.2 Questionnaires

The semi-structured questionnaire given in **Appendix III** was used to gather information on the performance of project implementation. The questionnaire contained specific questions related to the conceptualization and relevance, implementation and performance of the project. The questionnaire has been designed to minimize any forms of bias and to provide objective information on outputs and outcomes. The questionnaire was designed by the external evaluators for using in the field mission.

1.3.3 Site Selection

The study was random and conducted in 20 CFRs across 18 communes of 14 districts of 4 provinces and one municipality. It is to note that more 304 informants (57 female) included commune chiefs/councilors, village chiefs/deputies, and citizens (direct and indirect beneficiaries), and CFR committees and members in target areas.

Table #2: Statistics of Informants Consulted/Met in the Target Areas

Project Team		LAs (including Commune Chiefs /Councilors/ Clerks and Village Chiefs		CFR Committee		Direct Beneficiary		Indirect Beneficiary	
Total	Female	Total	Female	Total	Female	Total	Female	Total	Female
17	5	44	4	63	4	71	17	63	28
Total: 394 including 57 female									

In addition, 17 WorldFish staff and local NGO partner representatives (5 female) were involved in the project overview analysis in both individual and FGD interviews as well.

² The DAC Principles for the Evaluation of Development Assistance, OECD (1991), Glossary of Terms Used in Evaluation, in Methods and Procedures in Aid Evaluation, OECD (1986), and the Glossary of Evaluation and Results Based Management (RBM) Terms, OECD (2000).

1.3.4 Face-to-Face Interviews and Field Visits

A variety of methods were used depending on the situation and the opportunities. As far as possible these methods were participatory, allowing stakeholders to express their experiences and suggestions in an open way. These included:

- Document reviews (*A list of those document reviewed is in Annex VII*);
- Briefings and presentations from local NGO partner staff on their project progress, achievements and key challenges;
- KII with CFR committees and members to specific in individual and focus group discussion to review progress and collect information on:
 - ✓ *Relevance – to address the needs of the communities and to improve fish productivities in CFRs and to improve agriculture productivities, etc.*
 - ✓ *Efficiency – to judge by comparing actual achievements with the project output activities, and project monitoring systems.*
 - ✓ *Effectiveness – to judge by assessing progress towards the achievement of the project interventions.*
 - ✓ *Impact – to improve household incomes and food securities.*
 - ✓ *Sustainability – to assess the potential sustainability in ownership, financial policy links and community institutional capacity.*
- KII with LAs (commune chiefs, commune councils and village chiefs) to ensure a good rice field fishery management practices mainly for community aquatic resources dependent households.
- FGD with project participations with both direct and indirect beneficiary members to conduct specific assessment on the project outputs and outcomes.

1.3.5 Evaluation Report

A draft final report on the End of Project Evaluation was prepared and then this final version was prepared following comments from the WorldFish/RFFEP National Project Coordinator.

1.4 Structure of the Evaluation Report

The report is made up of five (5) substantive parts.

The evaluation report itself comprises six sections. Section 1 about an overview of project information and background and also an introduction to the need to undertake this final evaluation, purpose of the evaluation as well as the approach and methodology used to carry out the evaluation has been presented. Section 2 has provided mission findings of evaluation as well as synthesis findings of the project and sustainability used to carry out the project management Section 3 highlights the key challenges and lessons learnt, and some conclusions and recommendations during the evaluation mission are given in Section 4 and Section 5. *There are six (6) Annexes providing supplementary information.*

2- FINDINGS OF EVALUATION

This section reports the findings of this evaluation. In particular, they assess achievements against objectives and factors, which can improve sustainable rice field fishery management practices benefiting poor HHs at sub-national levels in four (4) provinces.

2.1 Relevance

How relevant is the RFFEP to the current CFR needs and direction of the NSDP and FiA Strategic Plan 2010-2019 in Cambodia? RFFEP works for securing food security and nutrition for the community in the form of the CFRs (under MAFF/Fishery Law, MAFF/FiA Strategic Plan 2010-2019, and MAFF Climate Change Action Plan in Agricultural Sector 2014-2018).

How relevant is the project activities to the current CFR needs? RFFEP contributes to the conservation of the CFR and supports local livelihoods, biodiversity and fully supports the RGC's Strategic Plan for RFFs as mentioned their importance to livelihoods and biodiversity MAFF/FiA Strategic Plan for 2010-2019 of the RGC. Under the **Strategic Planning Framework Goal No. 4 “the fisheries domain and associated resources are in a healthy and resilient condition and sustainably managed”**. One of strategic directions is to achieve improved livelihoods, employment, governance and sustainable financing which is in line with this project's activities.

Does Rice Field Fisheries (RFFs) contribute to address the needs of the target communities (men and women)? The general objective (develop improved sustainable RFF Management Practices mainly for poor aquatic dependent households), and the RFFEP specific objectives are to:

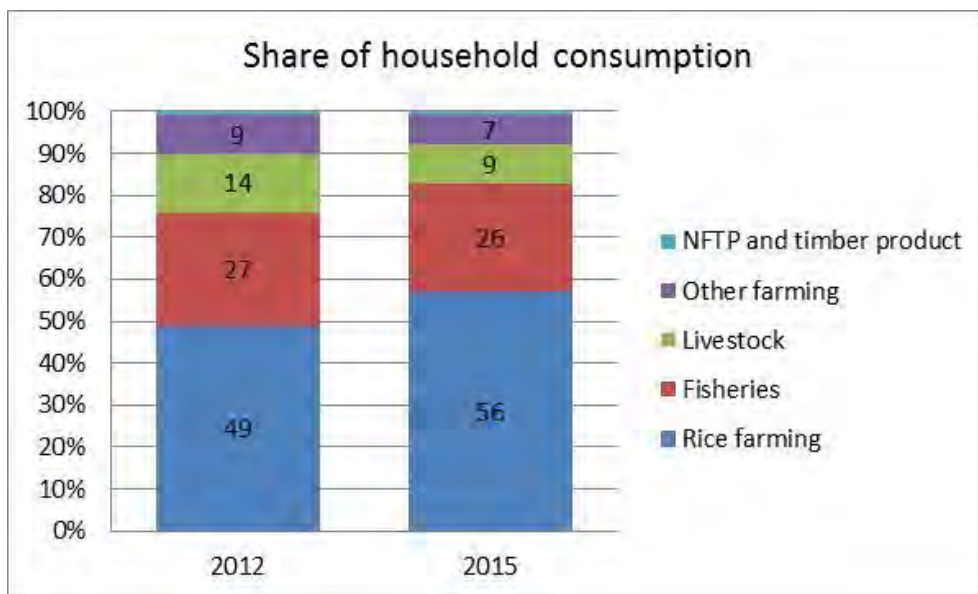
- ✓ The dynamics of rice field fisheries systems and impacts of improved management practices are more clearly understood, and
- ✓ Improved management practices of RFF systems are adopted by CFR development programme led by FiA, and also adopted by other agencies extending improved management of aquatic agricultural systems.

In addition, the project is highly relevant in terms of target area selection, beneficiary selection, and means of intervention. The targeted districts include the poorest and most vulnerable communities in target provinces. Group beneficiaries of the project were selected with appropriate methodology. The project activities, through local NGO partners, FiAs, LAs and communities' participation and the guidance of project's CFRs, consistently target the poorest and most vulnerable households in each village.

Does people consume more fish from rice field system? Freshwater fish is of great importance for food security and nutrition of the people in communities. People consume fish from rice field system as the second important source of food consumption. Communities have consumed the fish products include: dried fish, salted dried fish, prahoc, fish filleting, fish sauce, and fish for animal feed.

Household food consumption is largely dominated by rice farming for (56%) in 2015, the increase of (7%) compare to 2012. Its contribution amounts to (26%) in 2015.

Figure #2: People Consumption Fish



(Source: RFFEP Endline Survey Report)

Does people use water in the way was designed for improving fish productivities in CFRs and other agriculture purposes?

The majority of the household target communities are members and non-members of CFR who use water for improving fish productivities and agriculture productivities, etc. The most common cultivated crops in the study area are wet season rice, followed by vegetable and fruit sell of their products and keep the remaining for own consumption.

In general, all types of agricultural product per household increase remarkably during the study period and so does the sale amount per household. The amount of agricultural consumption per household of the common cultivated crops also rises except vegetable, which remains stable. About half of wet season rice production is for own consumption while the remaining is for sale.

Who get more benefit from this project?

There are prominent improved productivities of RFFs brought a number of direct beneficiaries (CFR committees and members) who are living in the project areas. There is a prevailing perception among respondents that livelihoods are improving, with rising incomes, fish products and nutrition.

Almost (100%) of intervention are highly relevant and appropriate for the target area communities which are RFF based livelihoods and economy with varying degrees of dependence on fishery productivities. Worldfish expertise in fishery and a history of working in this area placed them well to fulfill this role with target communities in around the Tonle Sap Lake. Feasibility and relevance of the project activities were thoroughly examined and tested. Increasing the skills and local technical capacity to improve local fishery production is important in creating self-sufficient food secure households.

2.2 Efficiency

As mentioned previously, in implementing the RFFEP a strong partnership and alliance

has been built with the FiA/FiAC and local NGO partners (COWS, TCO, VSG and ANKO) especially the LAs (commune and village) and local communities, and intervention support that can be mobilized to build the capacity of the communities to participate in the protection of the designated areas. The overall achievement of the RFFEP is around (98%) of the three expected outputs:

What trainings that LAs/CFR committees/members/local communities attended with the RFFEP project? Using their previous experience to build not only the capacity of 19 Local NGP Partner Staff but also all most 434 CRF Committee Members as well all communities in the project target areas on various topics such as:

- ✓ *Cambodian Fisheries Law;*
- ✓ *CFR Concept;*
- ✓ *Refuge pond;*
- ✓ *Cement range;*
- ✓ *Water quality;*
- ✓ *Flooded forest;*
- ✓ *Aquatic plant;*
- ✓ *CFR intervention plan and bio sampling;*
- ✓ *CFR roles and responsibilities;*
- ✓ *Facilitation skills;*
- ✓ *Conduct meeting;*
- ✓ *Commune planning process;*
- ✓ *Commune Investment Programme;*
- ✓ *Commune Development Plan;*
- ✓ *Commune/Sangkat Law;*
- ✓ *Community micronutrient fish;*
- ✓ *Community fundraising;*
- ✓ *Use of pesticide and herbicide, etc.*

What are the most significant changes after the training? As described above, the 434 committees received a number of inputs on capacity building and awareness raising activities from the project such as:

- ✓ *Significant capacity improvements in the various aspects of CFR management;*
- ✓ *31 CFRs³ among 41 CFRs were able to successfully raise significant amount of funds by themselves;*
- ✓ *Fish species diversity in the RFF sites was already very high;*
- ✓ *Average fish biomass increased by over (30%) of the project sites between 2012 and 2015; and*
- ✓ *Fish productivities per hectare of rice field increased by (20 %– 120%) between 2012 – 2015 depending on the CFR locations. In addition to these, HH that were not in the final 40 CFR sites HHs were still able to join and receive certain support from the project such as through training attendance.*

³ Equal (77%) of CFRs/RFFs indicated sustainable management and implementation based on the CFR/RFF Management Assessment;

The results at community level are even harder to gauge, and again rely on anecdotal reports from the members as to how they have been able to apply their skills for the benefits of the communities with which they live. This section attempts to look at some of these issues based on the information obtained through the interviews with communities and local authorities. Although they can see that participants have developed their skills and knowledge base and increased their confidence and negotiated with conflict party to respond to the situation at community level.

Are there any RFF/CFR Projects (outside RFFEP) that being implementation? The FAO team learned about RFFEP and decided to build their project on the experience and knowledge of the RFFEP team at WorldFish. FAO/FiA adopted a training manual developed by WorldFish/RFFEP team to train CFR committees and invited the RFFEP team to deliver a training course to FiA Cantonment officials as part of Training of Trainers exercise organized by the FAO project. The FiA officials who received training then went on to train community members in the FAO project's target areas. The FAO project also brought CFR committee members from its target areas to visit two CFRs supported by RFFEP in Kampong Thom and Pursat Provinces in study tours.

In addition, Conservation International and Forum Syd have expressed interest in adopting the RFFEP approach to support CFR committees in their projects target areas and are already using some of the assessment tools.

How did RFF/CFR helped communities in solving malnutrition? As a way of ensuring sustainable supply of nutritional fish, training were conducted to HHs through village meetings, cooking demonstrations, and classroom teaching to students, HH consumption of micronutrient-rich fish consumed in whole or with head remarkably increased. RFFEP coordinated with the local NGO partners in conducting learning sessions on micronutrient fish consumed (*Source: KII with direct and indirect beneficiaries*).

The training resulted to a very high satisfaction among the participants of the trainings. The staff from the local NGO partners introduced to the target beneficiaries (mostly CFR members and their communities) new methods of micronutrient fish consumption. The objectives of these activities were for consumption of small fish with head and guts, which have high micronutrient contents, among the target populations.

With CCM Survey in 2013, 2014 and 2015 have around (40%) of sample size (400 HHs) show that the amount of micronutrient rich species has been eaten an increment from 684.4 g/HH/week to 775.1 g/HH/week.

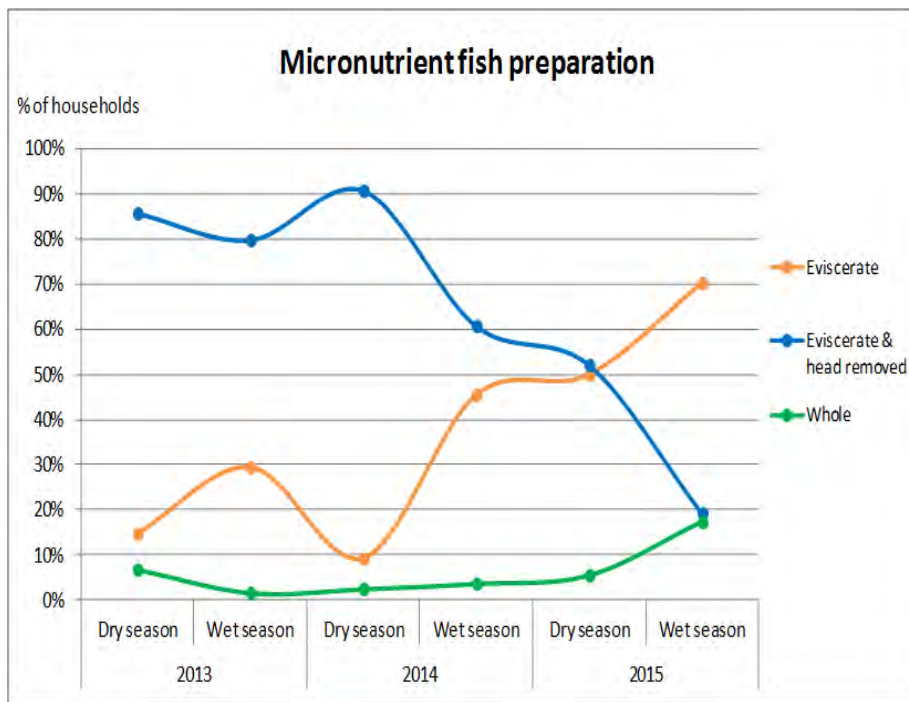


Figure 3: Micronutrient Fish Demonstration

2.3 Effectiveness

Most of the work plan activities targeted have been accomplished. Notably, the RFFEP has achieved the development of its management plan and the monitoring of biodiversity.

2.3.1 CFR Formalization and Management Plan Development

The CFR has been formed with a strong mandate to intervene and participate in the protection of the FiA Strategic Plan. Through this CFR and other awareness raising work, communities have generally expressed high levels of awareness about the importance of their fishery and natural resources, and have expressed strong concerns over the current threats and degradations of the fishery in their areas. In this case, with support from the project, the communities have been able to develop a clear influence zone map, where, in general, community members know the boundaries of their RFF and many participate actively to patrol it. At the same time, the CFRs have developed their own by-laws, and used these as a basis for natural resource distribution, ensuring equal access for all community members.

2.3.2 Established CFR Committees and Female Members

CFR committees//financier (cashier) were set up in collaboration with the LAs and the target communities. Committees were formed with participation from each target CFR site. The committees would play an important role to ensure the financial raising, sound management and maintenance of renovated irrigation canal after the project end. For the financiers of the CFR committees were female, there were an existing member established and recognized by the FiA and local NGO partners in the target area since 2012, only fundraising management and distributing would be created by the female member to support and maintain fish species and fish ranger in the lake. They would also play a role in combating with illegal fishing activities within the conservation lake.

Establishing CFR Financier would give the opportunity to the community to have their own fund in rehabilitating CFR through using contributing fund. They would not need to borrow from private business group or commercial bank with high interest rate. The community thus had their own saving fund especially for rehabilitating CFR, fence, shelter and petroleum for committee’s transportation and patrolling activities, etc.

2.3.3 Capacity Development

The evaluation found that much of community is involved in training, community committee elections, biodiversity monitoring, fund management, resource monitoring, planning, preparing by-laws, patrolling and nutrition whilst many of the very most vulnerable family and poor families do not have enough time to participate. Participation can be seen primarily as a means to achieve specific goals such as building a better management structure, obtaining improved goods and services and improving the condition of natural resources.

Capacity development has been conducted for the community. The 434 CFR Committees and 19 Local NGO Representatives also conducted monthly/quarterly meetings to monitor results of patrol activities, performance of committees, and to discuss issues affecting their sites. Moreover, WorldFish/RFFEP Team conducted a ToT for the FiA on CFR Management for 18 participants from the FiA at National Level and 12 participants from FiAC at the sub-national levels.

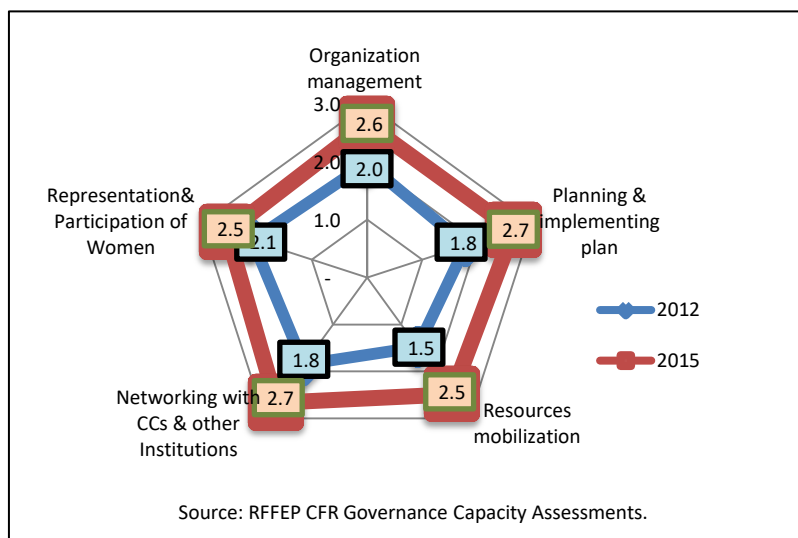


Figure #4: Average CFR Capacity Score (Higher the Score and Higher the Capacity)

However, even though the project has provided similar technical interventions and capacity building support to the CFR/RFF systems. There were around (32%) 13 CFRs out of 40 CFRs) have still suffered from poor governance management systems, which results in turn in poor fish and OAA productivity⁴.

Capacity building can help local communities to understand, learn and do something new and build a vision for the future or to change something in their lives and share what they

⁴ There are two challenges for the negative outcomes appeared to be the long-term of drought in 2015-2016, and conflict of interest among committee members and LAs, etc.

have learned to someone else. Based on the project survey, after awareness raising and training/coaching provided, a total of 909 people (94%) out of 970 HHs has changed their behaviors by applying new techniques. These techniques such as:

- ✓ *Cooking small fish for their children;*
- ✓ *Cultivating vegetables around refuge ponds;*
- ✓ *Stop illegal fishing; and*
- ✓ *Dig some more refuge pond, etc.*

Table #3: Activities implemented by CFR Committees as their Capacities are Strengthened

No.	Descriptions	Total
		(April 2013- April 2016)
1	# of activities implemented by CFR committees.	332
2	# of activities integrated into CIP and/or CDP.	193
3	# of activities supported by Local Authorities (CCs, Commune Chiefs, Village Chief/deputes, etc).	112
4	# of activities supported by other NGOs and DPs.	47
5	# of activities supported by FiAC and Line-departments.	21
6	# of activities supported by monks/pagoda/CFR Committees, etc	519
7	# of activities supported by private companies and charity.	10
8	# of fund raised in total.	\$58,535.00



Figure #5: Community Fundraising and Illegal Fishing Tools

2.3.4 Biodiversity and Ecosystem Improved

In mission during the dry season in the target areas, the CFR used to be dried up with limited water; hence, very few biodiversity particularly aquatic species such crab and snail could survive.

However, when water was available, biodiversity and ecosystem has been naturally increased. Through the evidence from the rice fields during the dry season after adopting this project, it could be seen that a number of birds have been remarkably growing in this area because more food has been increased in the CFRs. It was observed that dry season rice cultivation has promoted more biodiversity production including aquatic resources



(crab, fish, frog, etc.), and birds in the CFR sites.

Figure 6: Increasing in OAs and Birds in the CFR During the Dry Seasons in March 2016

2.3.5 Rehabilitation of Existing Canal and Natural Lake

There were existing can networks in the target areas; however, most of them were so shallow that water could not be kept to irrigate the rice fields and fish productions. The improved productivity of rice field fisheries brought a number of both direct and indirect beneficiaries living in around the project sites, in terms of food and nutrition security and income from the rehabilitation of existing canals and CFRs. During excessive rainfall in the target areas, it could not function as drainage canal to evacuate water to the fish productions and rice fields; therefore, rehabilitating the canal was crucial not only to improve water for irrigation but also to drain excessive rainwater from the CFR/CFF to the rice field and farming.



Fi



Figure #7: Canal Rehabilitation for Fish and Irrigation Drainage in the Target Area

2.3.6 Community Fundraising Groups

RFFEP has monitored the Community Fundraising Groups (SHGs) as the basis for building community financial capital as well as to enhance the functioning of the community solidarity and social capital. As was identified by this evaluation, the current functioning of these SHGs varied. Some are struggling to survive, while others are functioning smoothly. The quality of leadership has been reported as a crucial element in the overall operation of these groups. 31 CFR savings/fundraising groups have ceased their operation, whereas, in some groups, where both members and leaders have expressed strong commitment from various financial sources as village ceremony, pagoda box, public box, private sector charity and individual or community contributed, etc, they have been successfully managed and significant increases in financial capital has been reported.

Table #4: Amount of Community Fundraising

Item	Year				Amount
	2012	2013	2014	2015	
# of Community Fundraising	-	3,650.00	14,720.00	46,118.00	64,488.00

(Source: RFFEP Progress Reports 2012-2015)

In general the communities commented that the amount of raising and savings are still too small to serve the demand and needs of the group members, especially for cash cropping, where more capital inputs are needed. Furthermore, *the interviews with these community saving committees revealed the lack of long-term vision amongst the group members and some concerns were also expressed over their management capacity, when the amount of savings increases (Source: KII).*

2.3.7 Community's Interest to Sustain Project Activities

The community has expressed interest in continuing the CFR activities at the end of the project. Expectedly, the committees that are being implemented and supported by project will motivate the community to protect and sustain the activities of the project.

The proportion of households owned fishing processing equipment such as small cage to transport fish, barrel, smoke griller and jar for fish drop in the range of 5-26 percentage points between 2012 and 2015. However, an average fishing processing equipment per household remains almost unchanged. Given this evidence, it looks like households in the project areas engaged in fish processing activities less than they were in baseline. However, the amount of fish processed per household increases by 75% during the study period.

Table #5: The Amount of Fish and OAA Processed (kg/hh/year)

Items	2012	2015
Fish	44	77
OAA	16	19

(Source: RFFEP Endline Survey Report)

Good governance of CFR committees enables effective decision-making and implementation of processes in order to ensure good governance. These included organizational management, planning and implementation, resource mobilization, linkages and networking, and representation and participation. Characteristics of RFFEP's Good Governance:

- ✓ *CFR committee has regular meetings, bylaws and defined roles and communication among executive members;*
- ✓ *CFR committee has developed priority action plans, implemented the action plans, monitored the changes and can solve their problems and conflicts action.*
- ✓ *CFR committee has collected funds from various sources, uses the funds in transparent way, keeps records and participates in decision-making process in their among committees and communities.*
- ✓ *CFR committee has a good relationship with LAs, FiAC, CBOs working in their communities, and the private sector.*
- ✓ *Some CFR action plans have been integrated into CIP/CDP.*
- ✓ *Some CFR have received support form various stakeholders.*
- ✓ *Some CFR committee has attended CC meetings.*
- ✓ *CFR committee has gender diversity among the committee members and has various representatives.*

2.3.8 Monitoring and Evaluation System

Biological Monitoring Survey were assessed the situation of the CFRs and category as different figures on the status of the habitat and water quality and existing fish species by each CFR category. Moreover, Catch and Consumption Survey were identified every two months to monitor on the child nutrition collating data on consumption of fish by species and prepared of meal technique, and status fish catch and consumed and used for other purposes of fish and OAA by households (400 HHs). The project monitoring systems has been introduced by RFFEP to the community. It is a very simple tool that the community members were able to use. In order to establish causal linkages between project interventions and their outcomes, participatory tools and user perspectives were integrated into impact assessments, emphasizing the different types of changes and learning and promoting a culture of reflection and learning.

With the quarterly reflection workshop/meeting events of CFR Committee Representative's presented results and challenges and proposed management plans. This reflection process built upon the CFR Management Plan, with a greater emphasis on progressing and away forwarding. The CFR Management Plan is an essential element in the process of developing the community fisheries systems. The process is discussed and designed so that local communities will prepare the management themselves, with facilitation support from project team. The management plans focuses on how local communities can conserve and utilize their natural resources in a sustainable manner over a fixed time (quarter) period.

RFFEP, in particular the supported commercial activities, has no or negligible negative impacts on biodiversity and fishery cover neither current nor expected in future. RFFEP is working for the conservation of the fishery sources. The livelihoods that it supports focused on the traditional livelihoods of the community. Although the project does not produce significant impacts, the project needs closer monitoring, to ensure that the extraction and fisheries as their main income source and food security and the number of HHs possessed fishing assets decreases during the study period.

2.4 Potential Impacts

2.4.1 What are the Observed Changes in Improving the Household Income in Community?

As shown in Figure #7, rice farming and wage/salary labor are the two main activities for income generation. The share of rice farming to total income remained at (25%) for both 2012 and 2015, while that of wage/salary labor increased by (3%) points from (23%) in 2012 to (26%) in 2015. Fishery is the third income source for all households in the study areas. In 2012, the share of fishery to total income accounts for (15%) but it decelerates to (10%) in 2015 – a drop of 5% points. This does not necessarily imply that the absolute income generated from fishery declined since the total fish and OAA catch per HH increased and so do the price of fish and OAA. The share of other sources such as livestock and other farming activities also decrease from (14%) to (10%), and (10%) to (8%) in 2012 and 2015, respectively.

Box #1: Quote KII with a Farmer in the Aek Phnom District of Battambang, said that fish farming provides another source of income and food. However, he said that the majority of people don't focus on fish farms because they think it's too much of a personal commitment.

Figure 7: The Shared of Income Sources

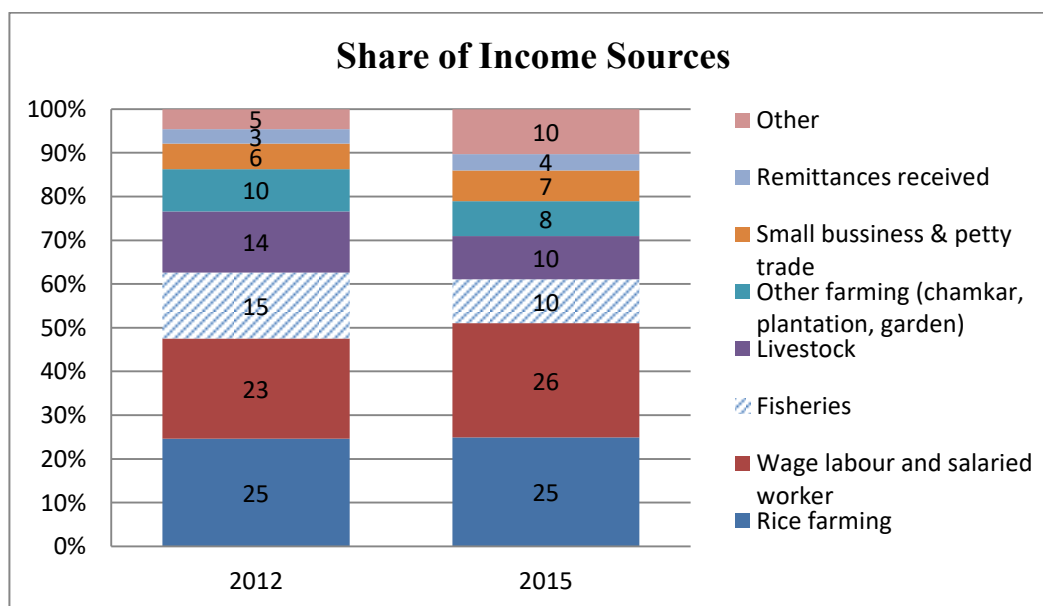


Figure #8: Share of Income Sources

(Source: Endline Survey Report, April 2016)

It is worth noting that fishery is the third income source for households in Battambang, Kampong Thom and Pursat, and the fourth in Siem Reap. In 2015, fishery remained as the third and fourth income source in Battambang and Siem Reap, respectively; and the fifth in Kampong Thom, but it has become more important – the second income source in Pursat.

Fishery is also the third income source for households in CFR 1 and CFR 4, the fourth in CFR 2 and the second in CFR 3 in 2012. But it has become the fourth in CFR 1 and the third in CFR 3, and remained as the fourth in CFR 2 and the third in CFR 4.

2.4.2 Does Rice field Fisheries (RFFs) constitute a vital Source of Nutrition for Local Citizens?

A high percentage of women report to feed their children between 4 and 12 months of age, with fish, small shrimps and fish crabs. Around (75%) of the households sated to prepare 2-5 times per week the children's food with fish and around (50%) with OAA. A difference can be noted between the direct and indirect households feeding their children with fish twice or less time per week.



Figure 9#: Parents Feeding their Children with Small Fish in Sla Slak CFR, Sla Slak Village, Anlong Run Commune, Thma Koul District, Battambang Province.

2.4.3 How do the project activities contribute to the food security in your family?

Food security sufficiency in the study areas is unlikely to present a clear pattern of seasonality. However, the proportion of households reports that they have sufficient food in all season increases significantly between 2012 and 2015. The proportion of households with sufficient rice accounts for the largest - in the range of 87%-97%, followed by fish 73%-83%, vegetable 66%-70%, meat 47%-53%, fruit 32%-37% and OAA 22%-30%. The increase of the proportion of households with sufficient meat is the largest – amount to 31-33 percentage points, followed by rice 22-28 percentage points, fruit 22-25 percentage points, vegetable 21-25 percentage points, fish 10-14 percentage points and lastly OAA 1-7 percentage points. This evident suggests that there is significant improvement of food and nutrition in the project areas.

Having noted that those highlighted food are good for their health, the reason of not consuming dry/smoked fish, cow/buffalo, vegetable (no leaf) and fruit is primarily due to the income shortfall and/or its high prices in both 2012 and 2015. In 2015, income shortfall and/or high prices have also been raised as the primary reason of not consuming blackfish. The availability of poultry and aquatic plant is major constraint for not having them in 2015.

(Source: RFFEP Endline Survey Report, April 2016).

2.4.4 What are the Observed Changes in Improving Household Consumption?

Household food consumption is largely dominated by rice farming – accounting for 56% in 2015, the increase of 7 percentage points from 2012. Fishery remains as the second important source of food consumption – its contribution amounts to 26% in 2015, roughly the same as in 2012. The share of livestock and other farming to food consumption decline by 5 and 2 percentage points between 2012 and 2015, respectively.

Figure #8: The Shared of Household Consumption

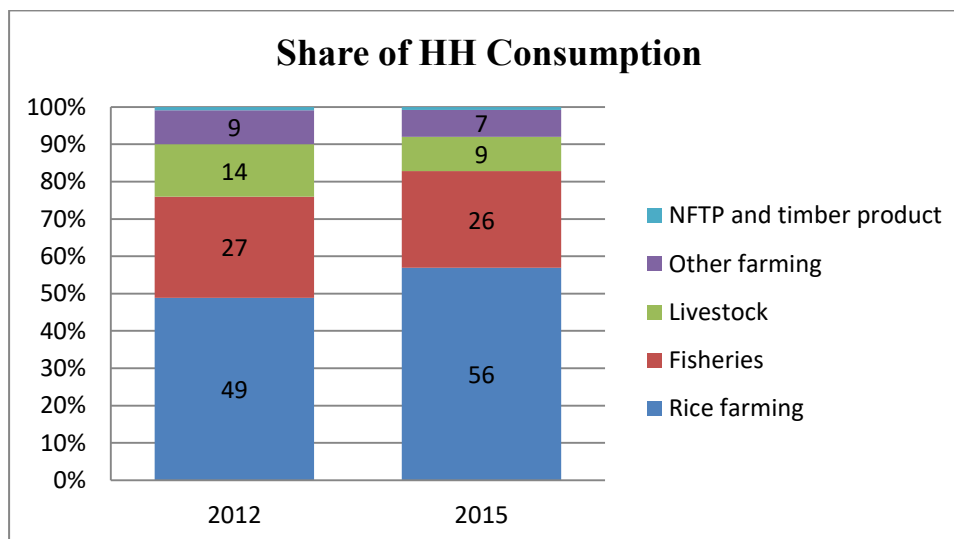


Figure #10: Share of Household Consumption

(Source: Endline Survey Report, April 2016)

The contribution of fishery to household food consumption reaches 31% in Siem Reap and 36% in Battambang in 2012. In 2015, fishery continues to contribute 35% to household food consumption in Battambang, but its share to household food consumption in Siem Reap declines to 24% - a drop of 5 % points. The share of fishery to household food consumption decreases the largest in Kampong Thom – from 26% in 2012 to 16% in 2015. The contribution of fishery to household food consumption rises from 18% to 31% during the period of 2012-2015.

2.4.5 What are the Observed Changes in Agricultural Productions?

The community also claimed to have CFR access to the agricultural products within the protected areas (zones 1 and 2), where most of the agricultural products such as maize, cassava, fruit crops/trees, vegetable, etc can be collected. During the first semester 2016 season a significant numbers of people from the targeted communities benefited from this collection. The proportion of households cultivates wet season rice amounts to (92%) in 2015 up from (88%) in 2012, while that of vegetable declines to (20%) in 2015 down from (32%) in 2012. The number of households cultivates fruit remains stable at (21%) of the survey households. The proportion of households cultivates other crops such as maize and/or cassava is less than (5%) except fruit trees which accounts for (10%).

All types of agricultural products per household increase remarkably during the study period and so does the sale amount per household. The amount of agricultural consumption per household of the common cultivated crops also rises except vegetable, which remains stable. Wet season rice per household amounts to (3,167 Kg) in 2015 - up from (2,408 Kg)

in 2012, while vegetable and food production per household doubles to (432 Kg) and (966 Kg) in 2015. About half of wet season rice production is for own consumption while the remaining is for sale. Households cultivated vegetable and fruit sell more than (75%) of their products and keep the remaining for own consumption.

Table #5: Agricultural Production Per Household

Items	Production per household (kg)		Amount consumed per household (kg)		Amount sold per household (kg)		Amount bartered per household (kg)	
	2012	2015	2012	2015	2012	2015	2012	2015
Rainfed rice	2,408	3,167	1,345	1,497	971	1,650	54	20
Dry season rice	2,545	8,244	772	1,427	1,788	6,818	38	-
Maize	359	674	50	39	302	635	-	-
Cassava	1,113	4,607	16	12	1,095	4,595	1	-
Fruit crops/trees	116	262	47	88	80	179	-	-
Vegetable	216	432	42	42	165	393	1	1
Fruits	563	966	47	127	519	845	1	2

(Source: Endline Survey Report, April 2016)

Box #2: Improving Water Availability and Ecosystem in the Vicinity Lake Reservoir CFR: A Case Study

More water from the canal diverted to the lake has reached up to a certain level comparatively higher than the previous conditions since water was much more available until the dry season. For instance, water level in the reservoir in the early year 2012 (after project started April 2012) was relatively high up to 2.5 meters if compared to the same periods over the past years accounted for only 1.5 meters. Consequently, it could remain sufficiently available for dry season use.

The community farmers living around the reservoir could use the water for both domestic and agricultural purposes for the whole year. During the period without rainfall, the communities were able to use the reservoir water for irrigating their proximate rice fields through a concrete water gate constructed within this project support.

In addition to this, it was also noticeable to observe the improvement of ecosystem service within the lake reservoir when more water has increased than the previous years. It was likely that more nutrients in the lake have been also improved due to rising in water level flowing from the canal. The communities have seen more fish and other aquatic resources growing than the previous years (Source: KII). The improvement on ecosystem and biodiversity production in the CFR would be served as a source of alternative food options for the communities; hence, this would help to partly support food security in the target areas. During the dry season or drought period, the animals such as cattle, fauna and flora could also access to available water for drinking.



2.4.6 What they do when their Community has Illegal Fishing?

The fundraising helped in financing the patrol work of the community. This has reduced illegal activities and resulted in the confiscation of tools/equipment used for illegal. Although there are occasional incidences of illegal cutting by outsiders, the community patrols have significantly contributed to the conservation of the fishery. The patrolling activities ensure that the fisheries are adequately protected and provide fishery products to the communities.



Figure #11: CFR Committees and LAs Collected and Born Illegal fishing Equipment Seized

The CFR patrolling activities also provides tangible benefits in exchange for effective conservation of high priority areas and fish species, making biodiversity conservation a viable choice for local resource sellers and eaters.

Box #3: Quote KII with CFR representative in the Enteak Kuma CFR, Enteak Kuna Village, Kampong Svay Commune, Kampong Svay District, Kampong Thom Province said that *“Illegal fishing activities in the CFR sites have decreased since the RFFEP has taken measures against them, we will continue to crack down on illegal fishing activities.”*

2.4.7 What are the most Significant Changes that Happened in their Lives since the RFFEP was implemented?

Household food consumption is largely dominated by rice farming – accounting for 56% in 2015, the increase of 7 percentage points from 2012. Fishery remains as the second important source of food consumption – its contribution amounts to 26% in 2015, roughly the same as in 2012. The share of livestock and other farming to food consumption decline by 5 and 2 percentage points between 2012 and 2015, respectively.

Figure 8: The Shared of Household Consumption

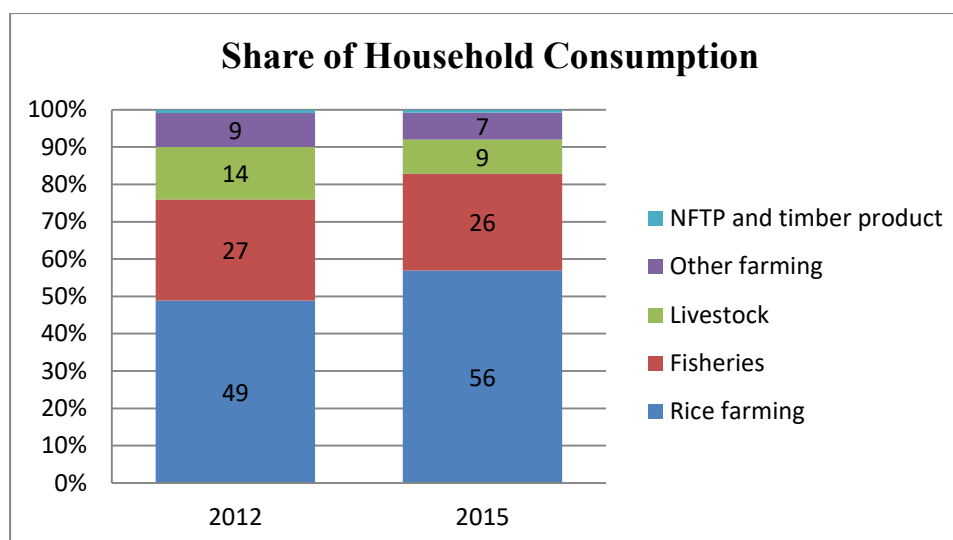


Figure #12: Share of Household Consumption

(Source: Endline Survey Report, April 2016)


The contribution of fishery to household food consumption reaches 31% in Siem Reap and 36% in Battambang in 2012. In 2015, fishery continues to contribute 35% to household food consumption in Battambang, but its share to household food consumption in Siem Reap declines to 24% - a drop of 5 % points. The share of fishery to household food consumption decreases the largest in Kampong Thom – from 26% in 2012 to 16% in 2015. The contribution of fishery to household food consumption rises from 18% to 31% during the period of 2012-2015.

2.5 Sustainability

Overall, the project can sustain its operation. The assessment is based on the following criteria: (1) effectiveness of the financial mechanism, (2) local authorities and communities' ownership and also look interest of the CFR interventions, (3) enabling Policies for the continuation of CFR, (4) capacity of the community to sustain the operation, (5) community's interest to sustain CFR activities, and (6) community benefit from sustained use. The assessment of the project based on these criteria is shown in **(Table 8)** below.

Table #6: Criteria in Assessing the Sustainability of RFFEP

No.	Criteria for Sustainability	Assessment of RFFEP's Sustainability
1.	Effectiveness of the Financial Mechanism: The proposed self-sustaining financial mechanism mentioned above is still in operation now or within the forthcoming years after the RFFEP Phase I out (2012-2016).	The financial mechanisms have just started to be implemented in the target communities. The communities received payments for environmental services and participation in the community's box (<i>pagoda boxes, village ceremonies, putting fund raising boxes in public places and private companies in order to implement some intervention activities to improve and manage RFF systems by</i>

No.	Criteria for Sustainability	Assessment of RFFEP's Sustainability
		<p><i>themselves</i>). This could be the reason for community members' participation with the project. The interest of the community to join the CFR will ensure sustainability of the project.</p> 
2.	<p>Local authorities (LAs) and communities also look interest of the CFR intervention: the CFR intervention and shelter has successfully designed, which have caught the interest of the LAs and communities (Source: KII and FGD).</p>	<p>Among the important factors that will ensure the continuation of the project are the following:</p> <ul style="list-style-type: none"> ✓ <i>Committees and communities are confident that the CFR interventions.</i> ✓ <i>CFR's shelter will have long-term impacts.</i> ✓ <i>Some SHGs have budget to provide patrolling in the nighttime.</i> ✓ <i>Determine the effectiveness of cement rings to conserve fish and OAA on the rice fields during early monsoon mini-droughts, etc.</i> ✓ <i>CC join and support future inputs and comments in order to protect and implement.</i> ✓ <i>Some action plans have been integrated into CIP/CDP.</i>
3.	<p>Enabling Policies for the Continuation of CFR: Applicable laws and regulations enable the continuation of RFFEP now and in the foreseeable future. Strong interest from other communities familiar with the RFFEP as well as applicable laws and regulations offer to scale up RFFEP within the next phases.</p>	<p>The EFFEP is supported and cooperated by the local FiA and FiAC (based on the KII). RFFEP is a novel approach that is piloted by WorldFish. Considering that it was implemented only in April 17, 2016, the uptake by other organizations of the concept is apparent. Thus, some organizations (FAO and FACT) as well as villages are keenly interested to be covered by the project.</p>
4.	<p>Capacity of the Community to Sustain the Operation: The involved community has the capacity and the resources needed to keep RFFEP going, in particular it has developed a self-sustaining financial mechanism in</p>	<p>The project has implemented some capability building measures to the target beneficiaries. Considering that the fund was only implemented in April 2016, there is a need for the community to be mentored on the management and handling of the financial resources. Moreover, project engaged of a</p>

No.	Criteria for Sustainability	Assessment of RFFEP's Sustainability
	order to fund fishery guard activities and a monitoring system to ensure the sustainable catch of fish resources.	wider stakeholder group improves the quality of the action plans and their overall integration into CIP/CDP.
5.	Community's Interest to Sustain CFR Activities: The local community is willing to continue CFR (that is, continue the sustainable use of fishery sources, maintaining the self-sustaining financial mechanism, funding CFR guard activities, monitoring fishery cover and biodiversity) and willing to maintain/extend the CFR arrangement with relevant authorities.	The community has expressed interest to continue the CFR activities at the end of the project. The response of the community to volunteer (CFR Committees and Members) for work in case funding support from CFR ends is a good indicator that the project can be sustained.
6.	Benefits from Sustained Use: The income and benefits generated from the CFR and the sustainable use of fishery sources is sufficient in order to make the local community protect their CFR now and in the foreseeable future (i.e. the income and benefits need to be as big as the income generated from any other legal use of the forest land based, the opportunity costs).	RFFEP provided funding support to the community (SHG) and charity boxes as an incentive for conserving the fishery sources. The fund has already showed indicators of success in terms of developing community enterprises. Some SHG will also sustain the CFR committees. An incentive will be provided to the committees (ranger) who will refer the patrolling to the CFR sites (night) <i>(Source: KII)</i> . 
7.	Training manual from project lessons learnt: The RFFEP Training Manual was approved as a national guideline by FAO and FiA and finalized as a joint publication with WorldFish.	FiA will continue to use this tool for providing support to WorldFish and FiA are also in the process of developing a technical guideline for developing CFRs for CFRs around the country.
8.	Other development partners/government agencies adopting and scaling up the projects.	FAO and FiA initiated a Technical Cooperation Program “ <i>Good Governance of CFRs for Food Security</i> ” in 2015 to support 18 CFRs in Oddar

No.	Criteria for Sustainability	Assessment of RFFEP's Sustainability
	RFFEP approach is already being adopted and scaled out by FiA, FAO, CI and Forum Syd learned on the RFFEP lessons learnt to build their projects.	Meanchey, Preah Vihear, Siem Reap, and Kampong Thom Provinces. Moreover, Conservation International and Forum Syd, have expressed interest in adopting the RFFEP approach to support CFR committees in their projects target areas and are already using some of the assessment tools.
9.	WorldFish/RFFEP Phase II scaling up:	WorldFish will cooperate and coordinate with local target NGO partners for implementation of the follow on project “ <i>Feed the Future Cambodia Rice Field Fisheries Phase II</i> ” in promoting CFRs in four target provinces.

The result of the household interviews indicates that majority of the stakeholders support the project. It should be noted also that there was an increased participation of the CFR when EFFEP started. The concept of RFFEP is aligned with the cultural norm of the local communities to preserve the ancestral properties. The communities, who are original inhabitants in the area, are interested to participate the CFRs. They wish to expand the community fishery to cover the nature lake that they considered as their ancestral lands. According to almost all CFR Committees:

RFFEP can contribute to the lasting benefits depending on the risks and the identified factors. Among the important factors that will contribute to the lasting benefits to the target communities are:

- ✓ *Sustained payments for the environmental services;*
- ✓ *Sufficiency of payments to support employment or livelihood of the community;*
- ✓ *Security of natural lake protection; and*
- ✓ *Effective monitoring. Despite the achievements and the accomplishments of the project to date, there is still a need for assistance to the community to ensure the contributing fund and enterprises are stabilized. After the project will phase out, a multipartite monitoring team may be organized, ideally composed of the representative from the community and FiA and the local authority to monitor the long-term impact of the project.*

Despite the interest of the communities and the government in the project, replication of the project activities and/or approach is not readily observed. As the project is still in its nascent stage of development it may take some time before other organizations will be able to copy the concept.

The predictions are also triangulated by the household interviews. Households interviewed from adjoining villages not covered by the project (*control group*) indicated their interest to be covered by the project. Some of those who joined the focus group discussion in control group expressed dismay that their community was not included by the project. The FGD and KII with the community leaders also indicated support to continue the project in their CFR.

3. CHALLENGES AND LESSONS LEARNT

The following have been identified as the key challenges to learn from the project evaluation. These could be summarized as follows:

3.1 Challenges

1. Some CFR members of the family will migrate to other provinces or countries to sell their labor, so they do not have time to participate in the patrolling of the fishery and other community management tasks.
2. There are still elements of relief work in this project. Beneficiaries are still looking for handouts because of their long association with relief work. Some citizens are not fully committed to some of the development, which they feel, might take long to be embraced by communities.
3. The zone of influence may be defined as the zone within which the benefits from the CFR and the incremental benefits from interventions to improve productivity of the refuge and surrounding rice field are realized. No boundary exists of atypical flooding. The project reviewed the targets of rice fields with connectivity to CFR, as well as households and fishers within the zone of influence.
4. Illegal activities are still a problem for management in some of the fisheries that have had CFRs implemented.
5. Some CFR committees, LAs and FiAC staff lack sufficient financial support for their local transportation to enhance CFR management and governance practices in the CFR targets.
6. Based on information obtained from CFR stakeholders in some areas relationships between CFR committees and LAs had not cooperated well. In some areas, CFR committees want to have help with their LAs (commune and village) that are authorizing in the areas, but they do not seem eager to cooperate and meet.
7. Some of CFR committees have limited knowledge of CFR process, social issue effect to community, and in-depth knowledge on CFR legal frameworks and/or guidelines.
8. Some local citizens have been using pesticides, herbicides and illegal fishing in their CFR sites and influence zones.
9. In some rural CFR areas poor roads and a lack of electricity make the storage and transportation of fisheries products difficult.

3.2 Lessons Learnt

Over the timeframe of the project, many lessons are learnt, including those that guided its adaptations throughout the process.

1. RFFEP Team, where local NGO partners are located in their own province office may face communication and coordination challenges but is likely to be more effective in promoting real partners coordination through increased mutual understanding and cross agency representation on specific themes.
2. Share of information between the local NGO partner representatives and the LAs has benefited the citizens and CFRs in their communities.
3. Direct citizen participation and ownership have been found very effective mobilization factor in achieving long-term project goals and sustainability of project outputs.

4. CFR committee that developed realistic action plans and practice transparency encourages fundraising through temples, the FiAC, private company and other local entities.
5. CFR committees that have regular meetings and a good recording system for income and expense have more local citizens participating in CFR management meetings, and citizens are more willing to contribute funding when the CFR committee and LAs contribute fundraising events in their communities.
6. Cooperation with FiA staff strengthens the capacity of the CFR committees and the LAs. This is very crucial in providing benefits of the project to the communities.
7. Wider consultation among the stakeholders is very important in mustering support from the community.
8. Security of CFR is requisite for the sustainable utilization of the fishery products. Capacity building that includes community management, conflict management, monitoring, protection and other technical fishery aspects will strongly determine the successful implementation of the community-based management of the fisheries.
9. Eco-agriculture will provide an ideal approach in the sustainable management of the landscape. However, the concept is still new and needs to be adjusted from one site to another. There is also a need to invest in building the body of knowledge and experience for this sustainable approach.
10. The project built the capacity of the LAs and communities including planning, implementing and monitoring and valuation. In addition, the LAs played an important role in coordinating with local NGO partners and technical line-department (FiA) to implement the project activities.
11. The project has introduced the target community to improve water harvesting which could ensure fish raising and farming activities during delay in rainfall or drought periods.

4. CONCLUSIONS

Local communities are served best when NGOs and local government information is freely accessible to all. The results are drawn from achieving with 40 CFR sites over a four-year period. In summary, active and well-governed all CFR committees coordinated better with other institutions, innovated and improved management of the CFRs and RFFs, as well as raised funds for self-support, resulting in higher yields in rice fields for local communities while maintaining fish biodiversity.

The project mainstreams gender in its overall activities and has increased awareness and support among decision-maker on women's rights on gender equity issues. Moreover, project has reached out to each small fish-cooking program in the gender equality and empowerment in fishery sector. Gender equality endorsement through increased awareness among women and men, improved attitudes both committees and communities, and enhance capacity of female decision. Heightened level of demand side of food security and nutrition recipients and trainees participation of women, youths along with a realization of the benefits of course participation.

Stakeholders' participation in both project implementation and decision-making has been highly satisfactory. The establishment of partnership and collaborative relationship developed by the project at the sub-national levels has been vital and meaningful in achieving the main objectives of the project. At the local levels, strong support from the LAs and communities has successfully facilitated the project activities. In addition, some local communities have been actively involved in the training courses and fish ceremony events.

Active CFR committees embraced innovation to generate ideas. Some committees have secured permission from LAs to harvest from part of the CFE for self-sustaining income to implement future management plans. Others use CFR embankments to grow vegetables, rice, and potential water and in one case excavated soil to deepen the CFR was sold to generate more income for further CFR expansion.

Overall, improved management of CFR systems led to reduced illegal fishing and increased catches by biological and livelihood monitoring survey.

5. RECOMMENDATIONS

A major requirement for this evaluation is to make recommendations for improvement and to give direction for the future, with suggestions for a strategic overhaul. Based on the finding above in relation to the implementation project, in evaluation mission would like to make a number of specific recommendations:

1. Link project activities with CIP/CDPs – RFFEP’s continued supports will be needed to encourage communities, committees and LAs to include food security, nutrition and NREM activities in CIP/CDP. For this to be sustainable there is a need to focus both on capacity development for the providers and authorities and developing communities’ ability to call for the inclusion of food security and nutrition issues in commune activities.
2. Project Team and Local NGO Partners must ensure that issues related to CFR should be well integrated into district and commune CDP/CIP so that they could share it part for the development of CFR dwellers. Especially LAs should be advocated to take into account of the issues on CFR site so that they would integrate the issues into their sector plan and turn their focus on CFR development and service.
3. Across boundaries – the sector also needs to face challenges which are of a global nature such climate change, food shortages, and illegal fishing by local vessels. To address there challenges will mean working more closely with other ministries, departments, institutes, agencies, and with neighboring countries to address cross-sectoral and train boundary issues. It will also mean creating an enabling policy, regulatory and support environment for the sector’s development.
4. RFFEP has considered the value of fisheries and natural resources before intervention and development decisions are made is key to ensuring sustainable development (*e.g applied and funded a decision-supported tool know as Integrated Valuation of Ecosystem Services and Trade-Offs-InVEST*). Project should be considered and engaged closely with committees and LAs to better understand the importance of specific ecosystem services within CFR sides that potentially benefit the local communities and the country as a whole.
5. Consider the Model of Community-Based Natural Resource Management: There is a need to revisit the key concept of CFR with the community:
 - ✓ *Dialogue about the appropriate size (specifically for enabling protection and management of key livelihood resources, such as type of fishes, OAA, etc.) which community’s feel they could manage.*
 - ✓ *Discussion and dialogue about seasonal community protected areas to allow for local management of key resources in core, protected and sustainable use zones.*
 - ✓ *Discussion and dialogue around the LAs (district and commune) and line-departments (FiA and FiAC) roles in collaborating with CFRs and with networks of CFRs.*
6. Capacity building provided to local staff:
 - ✓ *Conduct capacity needs assessment for project staff.*
 - ✓ *Provide regular capacity building and/or on-the-job training initiative.*
 - ✓ *Establish framework such as database to share information and achievements through training.*
7. Next phase to ensure further improvement:

- ✓ *Ongoing work is needed to strengthen the capacity of the CFR Committee Members.*
 - ✓ *Areas that villagers can use should be clearly demarcated, as people are afraid the encroachers will encroach into these community areas.*
 - ✓ *The work of demarcating the community fishery areas with posts should be completed.*
 - ✓ *Add posts in areas where communities feel demarcation is insufficient.*
 - ✓ *Support key leaders to better facilitate community involvement and mobilization.*
 - ✓ *Develop strategies for communities to work collectively to protect their community fishery from the outside encroachment⁵.*
 - ✓ *A cluster of community networks around the protected areas is needed or needs to be further strengthened, if any.*
 - ✓ *Discuss with community rangers about the problems they face in confronting illegal loggers⁶.*
8. Next phase should be:
- ✓ *Clarify fisheries interventions – identify potential fisheries interventions according to level of implementation (national, provincial, district and community).*
 - ✓ *Relevant information shared among cantonment stakeholders – regularly update relevant fisheries and cantonment stakeholders FiA, UN/NGO on fishery sector.*
 - ✓ *Consult with fisheries stakeholders – meeting with cantonment fisheries stakeholders to discuss fisheries issues, challenges and opportunities in the cantonment.*
 - ✓ *Conduct fisheries forums/events – conduct events for discussing particular subjects related to fisheries (e.g CFi, fisheries conservations, etc) that bring together key stakeholders and will improve the FiAC plan and implementation.*
9. REFFP has made remarkable contribution to local governance in CFR process since every element of good governance principles were examined and ensured through diversified activities, and wisely integrated into every working commitment, approaches or process arrived at these principles.
10. IEC Materials – public information on services provided by project staff is important to increasing the citizens’ awareness and access to those services. Both project staff and local stakeholders need to be aware of what they can expect from the local providers and therefore it is important that the project staff, project staff and LAs are well informed on how to efficiently disseminate this information in their target areas. These information dissemination strategies include both how to use the media as a means of announcing project services, and how to most efficiently use traditional community network. While much has been done to improve the materials used by the project, especially with regard to translating into vernacular, there are some key recommendations for consideration, viz:
- ✓ *Use simple approach for information dissemination. Developed and implement documenting activity tools such as posters, newsletters, video projectors, photographs, and voice recorders to capture training sessions.*

⁵ *Develop and learn from community driven protection activities;*

⁶ *Ex: In the fishery to see what can be done to strengthen their roles and authority;*

- ✓ Translate training or IEC materials into the languages of project target beneficiaries; and
- ✓ Utilize local facilitators (LAs) and FiA in the target communities to address language barrier.

11. Link CFR activities with home gardening/lake gardening – this project showed clear evidences on adaption to drought through constructing water harvesting structure to keep the water for year round and fish sustainable. New phase should be linked and introduced new resilient seed variety with lakeside gardening, and leading to change in cropping calendar. Therefore, it is considered as a successful example in community-based adaption to climate change on drought.



12. Increasing Collaboration with Concerned Stakeholders – to enhance additional capacity building and collaboration, it is recommended that project team would build up and strengthen the active network with peer NGOs and government institutions, who have similar project activities in the region (*such as: FACT, AS, KAWP, PADEK, DKK, COFAP, HOM, FiA, and FiAC as well as LAs*) that have long experience in health and other aspect of rural development, food security and nutrition. Furthermore, the government has increased its budget for supporting health and nutrition in order to reduce poverty, especially in rural areas. With this development, there may be benefits from having good collaboration with government agencies. Also, this linkage will help local institutions to sustain their operation and project implementation in the future.
13. Sustain the Provincial NGO Network (Fishery Sector) – the close working relationship between FiA and local Provincial NGO Network should continue after the end of the project. FiA intends to promote this by continuing the periodic meetings of the network. Possible funding sources include CC funds and FiA funds (RGC's Budget).
14. Further work should also be done with the wider micronutrient fish video and training manuals/guidelines, including working with civil society, UNs and RGC. Dialogue amongst key stakeholders should be continued and expanded at both the national and sub-national levels as well as regional level.
15. The RFFEP should continues a study tour, which includes the questions above in order to guide future improves on local public service and rice-field agro-ecosystems programs for improving food and nutrition security and identity best participatory practices in scheme selection and monitoring processes.
16. It is suggested that at the end of each year, WorldFish and local NGO partners should organize and invite key stakeholders (Peer NGOs, Provincial NGO Network on Fishery Sector, FiA and FiAC, etc) for an Annual Issues Briefing Workshop focused on those whose work has sectoral similarity in CFR, CFF, food security, nutrition, NREM, etc. and who might be able to usefully contribute to the fishery discussion and policy debate, etc.

ANNEX I. TERMS OF REFERENCE (TOR)

RICE FIELD FISHERIES ENHANCEMENT PROJECT 2012-2016

End of Project Evaluation

Terms of Reference

1. BACKGROUND/RATIONALE

The Rice Field Fisheries Enhancement Project (RFFEP) is a four-year project funded by USAID. Now it is in its final year of implementation, which is to be completed in March 2016. The project has been working closely with various stakeholders such as community fish refuge committees (CFR committees), local authorities (village chiefs, commune councils), Fisheries Administration Cantonment (FiAC) as well as FiA at central level, and in direct partnership with four local NGOs in each of the four target provinces (Kampong Thom, Siem Reap, Pursat and Battambang).

The objective of this project is to improve sustainable rice field fishery management practices benefitting poor households in four target provinces.

The types of activities that this project has implemented are:

- Supporting technical intervention activities such as deepening part of community fish refuge ponds, removal of aquatic vegetation to improve pond habitats for fish and other aquatic animals,
- Improving capacity of CFR committee on management plan development, implementation and fund raising in coordination with various stakeholders such as FiA, FiAC, local authorities and community people,
- Conducting biological monitoring and fish catch and consumption surveys to monitor the status of fish biomass and diversity, and its use by the target households in all 40 CFRs,
- Increasing awareness of local communities and relevant stakeholders through awareness raising events in communities and schools in project's target areas,

2. OBJECTIVE OF AN EXTERNAL PROJECT EVALUATION

To give more creditability for people outside the project on the findings and avoid bias, To give project team gain more certain evaluation skills and knowledge that internal team may not have, moreover, evaluator may be able to explore a wider range of issue, lessons learnt and practices that would be useful for future project implementation.

3. SCOPE & FOCUS

The evaluation will focus on the overall levels of achievement against the Rice Field Fishery Enhancement Project's objectives and outputs as detail below:

3.1 Relevance

- Is there any good fit between the project's intervention and the National Strategic Development Plan (NSDP), MAFF and FIA strategic plan 2010-2019 which are the

key instruments for Cambodia in seeking to achieve the Cambodia's Millennium Development Goals?

- Do rice field fisheries contribute to address the needs of the target communities (men and women)?
- Do people consume more fish from rice field system?
- Do people use water in the way was designed for improving fish productivities in CFRs and other agriculture purposes?
- Who get more benefit from this project?

3.2 Economy and Efficiency

Efficiency can be judged by comparing actual achievements with the section of the log-frame of the project and input, activity implementation and monitoring system management for this project as well as benefit of the project to target community people especially for the poor and vulnerable group.

3.3 Effectiveness

Project effectiveness can be judged by assessing progress towards the achievement of the specific objective set out in the log-frame. Moreover, the following question can be asked:

- Do the project interventions improve rice field fisheries productivities?
- Do project interventions improve the capacity of CFR committee on governance of CFR and rice field fisheries system? If yes, in what ways? If not why is does?
- Do project interventions give an opportunity for female leadership?

3.4 Impact

The overall objective of the project is to support the achievement of Cambodia's MDG 1 (eradicate extreme poverty and hunger) through improving fish production in rice field system. Do interventions contribute to improve household income and food securities? Who are the most beneficiaries?

3.5 Sustainability

In assessing impact sustainability consideration must be given to four factors:

- *Finance*. Is there a reliable mechanism to generate enough money to maintain the rice field fishery management and benefit?
- *Ownership*. Do the beneficiaries (men and women) and other stakeholders value the benefit and want to maintain it?
- *Project to Policy Links*. Is there an official policy, if necessary, which recognizes and implements the processes and maintains the institutions, needed to maintain the benefits?
- *Community institutional capacity*. Do the necessary community institutions exist and do they have adequate capacity to survive without external support?

4. METHODOLOGY AND TIME FRAME

4.1 Stakeholder Involvement & Evaluation Team

Stakeholder participation is essential to this evaluation. The consultant is expected to conduct a participatory evaluation with comprehensive involvement from CFR committees, Commune Councils, Fishery Administration staff, LNGOs and WorldFish staff. It is predicted that a random sample selection of the key respondents from varying

degrees will be carried out for the study. The evaluation team will consist of a consultant appointed by WorldFish and Project stakeholders from each target province.

4.2 Responsibilities

The consultant will report to the project leader of RFFEP and is responsible for:

- Conducting the evaluation;
- the day-to-day management of operations;
- Regular progress updates to project leader;
- Review of primary data collection and secondary sources;
- The synthesis, presentation and discussion of findings in a one-day workshop in Phnom Penh for the Country Management Team; and
- The completion and submission of the evaluation report within the agreed time frame.

4.3 Evaluation Process

4.3.1 Evaluation Work plan

The consultant will prepare a work plan that will direct the evaluation and describe how it will be carried out, bringing refinements, specificity and elaboration to the terms of reference. The evaluation plan will be approved by the project leader and will act as the agreement between the parties on how the evaluation is to be conducted.

The evaluation work plan will address the following reporting elements:

- Overview of Program
- Expectations of the Evaluation
- Roles and Responsibilities
- Evaluation Methodology
- Evaluation Framework
- Information Collection and Analysis
- Reporting
- Work Scheduling

4.3.2 Field Work

The evaluation will be centred on field visits to the four target provinces; the team will need to work closely with the National Project Coordinator, Research Officers and executive director of partner NGOs. It is expected that a total of **20 working days (four weeks)** will be required for both fieldwork and completion of the evaluation report.

3.3.3 Desk Review of project reports (CCM, BiOM, Livelihood Survey, CFR/RFF governance and some brochures) as results of project interventions and in cooperate with project findings from the field visit (primary data) which will be conducted by external evaluation team through HH interviews and FGD.

3.3.4 Evaluation Report




The consultant will prepare an evaluation report that describes the findings and presents the findings, recommendations and lessons learned to management team of the project. A draft report should be submitted after the presentation workshop. Within one week of receiving feedback on the draft report the consultant will submit the final report, which will include an executive summary and relevant appendices. An electronic copy and a hard copy are required. The main body of the report should be between 20-25 pages long.

ANNEX II. SUMMARY OF CFR CHARACTERISTICS BY CATEGORY



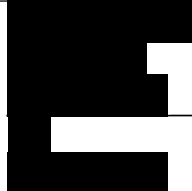
	Category1- Upland reservoir	Category2- Pond not prone to flooding	Category3- Pond prone to flooding	Category4- Natural lake
Agro-ecological zone	Upland areas Rain-fed or irrigated	Higher areas of lowlands	High areas of lowland to flooding	Higher areas of lowlands
	Rice	Rian-fed rice	Rian-fed rice	Rian-fed rice
	Broadcast wet season transplant dry season Early – and medium – maturity rice	Wet season rice cultivation and broadcasting	Dry season rice cultivation, less transplanting in dry season More late – maturity rice	Lowlands Deep water rice and some recession
Water body and community fish refuge	Community fish refuge within larger water body (upland reservoirs) Greater water transparency	Community fish refuge community pond No flooding Greater water transparency	Community fish refuge community pond Prone to flooding	Community fish refuge within larger water bodies (natural lake of flooded area of lowland)
Channels and rice fields	Sometime longer connecting channels Fish migration via water gates; may be hampered by water structure	Shorter connecting channels Smaller area of connected rice fields Most trap ponds Fish migrate via inlet and outlet channels or culverts	Shorter connecting channels Fish migrate via open channels, concrete pipes or entire flooded rice field	Varied connections can be either culvert- type or on channel at all due to seasonal inundation and flooding around the shoreline of the larger water body and paths for fish migration
Fishery resources	Greater portion of fish eaten from rice fields Average fishing months: 9	Smaller portion of fish eaten from rice fields Average fishing month:6	Smaller portion of fish eaten from rice fields Average fishing month:6	Greater portion of fish eaten from rice fields Average fishing Months: 10 Wide range of species


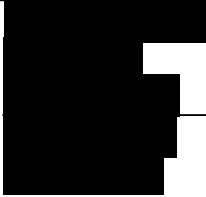

	Category1- Upland reservoir	Category2- Pond not prone to flooding	Category3- Pond prone to flooding	Category4- Natural lake
Management	<p>Most illegal fishing still taking place</p> <p>Management plan agreed to but poorly implemented</p> <p>Good opportunity to promote tourism</p>	<p>Management committees responsible for entire body of water</p> <p>Few illegal fishing activities still taking place</p>	<p>Management committees responsible for entire body of water</p> <p>Committees meet most regularly</p> <p>Management plan agreed to and many tasks and actions implemented</p> <p>Some illegal fishing still taking place</p>	<p>Protected areas marked by sign board or marker poles</p> <p>Some illegal fishing still taking place</p>
Zone of influence	<p>Highest overall number of households benefiting</p> <p>Highest percentage of households fishing</p> <p>Highest estimates of fishers from outside</p> <p>Second highest connected rice field</p>	<p>Number of households benefiting lower than categories 1 and 4</p> <p>Second highest percentage of households benefit fishing</p> <p>Lowest estimates of fishers from outside</p> <p>Lowest connected rice field</p>	<p>Lowest overall number of households benefiting</p> <p>Lowest percentage of households benefit fishing</p> <p>Second highest estimate of fishers from outside</p> <p>Highest connected rice field</p>	<p>Second highest overall number of households benefiting</p> <p>Second highest of households benefit fishing</p> <p>Third highest estimates of fishers from outside</p> <p>Third highest connected rice field</p>

ANNEX III. TENTATIVE SCHEDULE MEETING/INTERVIEW

Team	Date	Time	Province	District	Commune/ Sangkat	CFR	Shape/ Dis- to TLS	No. of Organization/ Informant per CRF and/or Province.	Remarks
Team (A)	16 March	2:00 pm	<i>Departure from Phnom Penh to Pursat.</i>						
	17 March	8:00 am	Pursat	Krakor	Boeng Kantuot	Boeng Kantuot	Rectangle (15 Km)	- 1 KII with CC. - 1 FGD with CFR Committee. - 5 HHs with 5 Direct Beneficiaries. - 5 HHs with 5 Indirect Beneficiaries.	
		2:00 pm			Sna Ansa	Damnak Kranh	Rectangle (13 Km)	- 1 KII with CC. - 1 FGD with CFR Committee. - 5 HHs with 5 Direct Beneficiaries. - 5 HHs with 5 Indirect Beneficiaries.	
		5:00 pm	<i>Departure from Krakor to Pursat</i>						
	18 March	8:00 am						- 1 KII with Research Officer.	
		9:30 am						- 1 KII with FiA staff.	
		11:00 am						- 1 FGD with NGO Representative.	
		12:00 pm	<i>Departure from Pursat to Phnum Kravanh.</i>						
	2:00 pm		Phnum Kravanh	Phteah Rung	Boeng Preah Ponley	Rectangle (55 Km)	- 1 KII with CC. - 1 FGD with CFR Committee.		

Team	Date	Time	Province	District	Commune/ Sangkat	CFR	Shape/ Dis- to TLS	No. of Organization/ Informant per CRF and/or Province.	Remarks
								- 5 HHs with 5 Direct Beneficiaries. - 5 HHs with 5 Indirect Beneficiaries.	
	19 March	8:00 am		Bakan	Boeng Bat Kandal	Boeng Tramses	Rectangle (25 Km)	- 1 KII with CC. - 1 FGD with CFR Committee. - 5 HHs with 5 Direct Beneficiaries. - 5 HHs with 5 Indirect Beneficiaries.	
		2:00 pm			Snam Preah	Aren	Rectangle (35 Km)	- 1 KII with CC. - 1 FGD with CFR Committee. - 5 HHs with 5 Direct Beneficiaries. - 5 HHs with 5 Indirect Beneficiaries.	
		5:00 pm	<i>Departure from Bakan to Moug Ruessei</i>						
	20 March	8:00 am	Battambang	Moug Ruessei	Prey Touch	Ang Chork	Rectangle (45 Km)	- 1 KII with CC. - 1 FGD with CFR Committee. - 5 HHs with 5 Direct Beneficiaries. - 5 HHs with 5 Indirect Beneficiaries.	
		12:00 pm	<i>Departure from Moug Ruessei to Battambang</i>						
		2:00 pm						- 1 KII with FiA staff.	

Team	Date	Time	Province	District	Commune/ Sangkat	CFR	Shape/ Dis- to TLS	No. of Organization/ Informant per CRF and/or Province.	Remarks
		3:30 pm						- 1 FGD with Local NGO Partner.	
	21 March	8:00 am		Sangkae	Kampong Prieng	Boeng Krong	Rectangle (38 Km)	- 1 KII with CC. - 1 FGD with CFR Committee. - 5 HHs with 5 Direct Beneficiaries. - 5 HHs with 5 Indirect Beneficiaries.	
		12:00 pm	<i>Departure from Battambang to Aek Phnum</i>						
		2:00 pm		Aek Phnum	Preaek Luong	Boeng Dai Phtaul	L-shaped (44 Km)	- 1 KII with CC. - 1 FGD with CFR Committee. - 5 HHs with 5 Direct Beneficiaries. - 5 HHs with 5 Indirect Beneficiaries.	
	22 March	8:00 am	<i>Departure from Aek Phnum to Thma Koul</i>						
		2:00 pm		Thma Koul	Anlong Run	Sla Slak	Rectangle (72 Km)	- 1 KII with CC. - 1 FGD with CFR Committee. - 5 HHs with 5 Direct Beneficiaries. - 5 HHs with 5 Indirect Beneficiaries.	
	23 March	8:00 am	<i>Departure from Thma Koul to Phnom Penh.</i>						
Team	17 March	2:00 pm	<i>Departure from Phnom Penh to Kampong Thom.</i>						

Team	Date	Time	Province	District	Commune/ Sangkat	CFR	Shape/ Dis- to TLS	No. of Organization/ Informant per CRF and/or Province.	Remarks
(B)	18 March	8:00 am	Kampong Thom					- 1 KII with Research Officer.	
		9:30 am						- 1 KII with FiA staff.	
		11:00 am						- 1 FGD with NGO Representative.	
		2:00 pm		Prasat Sambour	Sambour	Boeng Prahouch	Sinuous (72 Km)	- 1 KII with CC. - 1 FGD with CFR Committee. - 5 HHs with 5 Direct Beneficiaries. - 5 HHs with 5 Indirect Beneficiaries.	
	19 March	8:00 am		Kampong Svay	Kampong Svay	Enteak Kuma	Rectangle (52 Km)	- 1 KII with CC. - 1 FGD with CFR Committee. - 5 HHs with 5 Direct Beneficiaries. - 5 HHs with 5 Indirect Beneficiaries.	
		2:00 pm			Tbaeng	Bakong	Rectangle (30 Km)	- 1 KII with CC. - 1 FGD with CFR Committee. - 5 HHs with 5 Direct Beneficiaries. - 5 HHs with 5 Indirect Beneficiaries.	

Team	Date	Time	Province	District	Commune/ Sangkat	CFR	Shape/ Dis- to TLS	No. of Organization/ Informant per CRF and/or Province.	Remarks	
	20 March	8:00 am			Trapeang Ruessei	Boeng Tbea	L-shaped 42 Km	- 1 KII with CC. - 1 FGD with CFR Committee. - 5 HHs with 5 Direct Beneficiaries. - 5 HHs with 5 Indirect Beneficiaries.		
		2:00 pm		Stoung	Pralay	Trapaing Thlok Meanchey	Rectangle (37 Km)	- 1 KII with CC. - 1 FGD with CFR Committee. - 5 HHs with 5 Direct Beneficiaries. - 5 HHs with 5 Indirect Beneficiaries.		
		5:00 pm	<i>Departure from Stoung to Siem Reap</i>							
	21 March	8:00 am	Siem Reap					- 1 KII with FiA staff.		
		10:00 am						- 1 FGD with NGO Representative.		
		2:00 pm		Chi Kraeng	Kouk Thlok Leu	Tum nub Mkak	Rectangle (45 Km)	- 1 KII with CC. - 1 FGD with CFR Committee. - 5 HHs with 5 Direct Beneficiaries. - 5 HHs with 5 Indirect Beneficiaries.		

Team	Date	Time	Province	District	Commune/ Sangkat	CFR	Shape/ Dis- to TLS	No. of Organization/ Informant per CRF and/or Province.	Remarks
	22 March	8:00 am			Pongro Leu	Tumnup Kandole	Rectangle (39 Km)	- 1 KII with CC. - 1 FGD with CFR Committee. - 5 HHs with 5 Direct Beneficiaries. - 5 HHs with 5 Indirect Beneficiaries.	
		2:00 pm		Sotr Nikum	Dan Run	Trapaing Kuy	Rectangle (9 Km)	- 1 KII with CC. - 1 FGD with CFR Committee. - 5 HHs with 5 Direct Beneficiaries. - 5 HHs with 5 Indirect Beneficiaries.	
	23 March	8:00 am		Puok	Prey Chruk	Lboeuk Keteyuos	Rectangle (35 Km)	- 1 KII with CC. - 1 FGD with CFR Committee. - 5 HHs with 5 Direct Beneficiaries.	

Team	Date	Time	Province	District	Commune/ Sangkat	CFR	Shape/ Dis- to TLS	No. of Organization/ Informant per CRF and/or Province.	Remarks	
								- 5 HHs with 5 Indirect Beneficiaries.		
		2:00 pm		Kralanh	Sranal	Kok Lhong	Rectangle (38 Km)	- 1 KII with CC. - 1 FGD with CFR Committee. - 5 HHs with 5 Direct Beneficiaries. - 5 HHs with 5 Indirect Beneficiaries.		
	24 March	8: 00 am				Pur Sdey	Rectangle (41 Km)	- 1 KII with CC. - 1 FGD with CFR Committee. - 5 HHs with 5 Direct Beneficiaries. - 5 HHs with 5 Indirect Beneficiaries.		
	25 March	8:00 am	<i>Departure from Kralanh to Phnom Penh</i>							
				14 District	18 Communes	20 CFRs		Around 430 persons		

ANNEX IV. SUMMARY PROGRESS AGAINST THE EFFEP OBJECTIVES

Verifiable Indicators of Achievement	Achievements as of March 2016
<p>Goal: Improved sustainable rice field fishery management practices adopted nationwide benefitting mainly poor households.</p>	
<p>At least 75% of rice field fisheries with CFRs indicate increased production of at least 50kg/hectare/year and biodiversity has improved.</p>	<p>During the proposal development stage in 2012 we expected that the rainfall in RFF system in 2012, 2013, 2014 and 2015 would be at the similar level. However, the rainfall in 2015 was the lowest compared to other years. This is one of the main factors contributes to fish productivity and fish catch in the rice field system. Even though rainfall in 2015 was lowest compared to other year but the average fish caught per hectare was increased in most RFF system. It potentially indicated the impact from the project interventions.</p> <p>2012 & 2015 (livelihood survey): Based on livelihood baseline and end line survey indicated that 25 out of 40 RFF (63%) showed increment of fish catch. The average increment is 55 kg/hectare/year.</p> <p>2013 & 2014 (CCM survey): Based on CCM survey in 2013 & 2014 indicated that 25 out of 40 RFF (63%) showed increment of fish catch. The average increment is 61 kg/hectare/year.</p> <p>2013 & 2015 (CCM survey): Based on CCM survey in 2013 & 2015 indicated that 17 out of 40 RFF (43%) showed increment of fish catch. The average increment is 39kg/hectare/year. The number of RFF showed increment of fish catch in 2015 is less than 2014 because of severe drought in 2015.</p>
<p>Purpose: Sustainable rice field fishery models developed and communicated for national scale out</p>	
<p>Models show that at 75% of test sites average increase 50kgs/hectare/year of fish from rice fields benefitting 100,000 people.</p>	<p>2012 & 2015 (livelihood survey): Based on livelihood baseline and end line survey indicated that 25 out of 40 RFF (63%) showed increment of fish catch. The average increment is 58 kg/hectare/year. The total estimated HHs benefit from fishing activities is around 18,702 HHs equal to 87,899 people.</p> <p>2013 & 2014 (CCM survey): 25 out of 40 RFF (63%) showed increment of fish catch. The average increment is 61 kg/hectare/year. The total estimated HHs benefit from fishing activities is around 18,377 HHs equal to 86,372 people.</p> <p>2013 & 2015 (CCM survey): 17 out of 40 RFF (43%) showed</p>

	increment of fish catch. The average increment is 39 kg/hectare/year. The total estimated HHs benefit from fishing activities is around 15,101 HHs equal to 70,975 people.
Potential nutritional and livelihood benefits demonstrated including resource requirement for national scale out.	A program brief on the potential of community fish refuges (CFR) in rice-field agro-ecosystems for improving food and nutrition security and recommendations for scaling CFR lessons in the Tonle Sap region was developed. Households interviewed in the RFFEP Livelihood survey ranked fisheries as second source of food consumption after rice. It contributes to food security for rural households. For detail information see the detail of livelihood survey report.
Sustainable management of 75% CFRs by community groups demonstrated.	Based on the CFR capacity assessment result conducted in 40 CFRs/RFF systems with 552 respondents including 162 women and 390 men from CFR committees, village chief, commune council and community representatives were interviewed. Five main indicators on CFR/RFF system management including i)-CFR committee institutional structure, ii)-planning and implanting action plans, iii)-resources mobilization, iv)-networking and v)-participation and representation were assessed. As result 31 out of 40 CFRs/RFFs (77% of CFRs/RFFs) indicated sustainable management.
Outputs	
1. Existing rice field fisheries environments fully characterized and up to 5 categories described.	
Criteria developed for 4-5 categories of RFF of the Tonle Sap Great Lake Provinces by Year 1.	CFR/RFF systems have been defined with 4 categories as describe in CFR/RFF category handbook. The purpose of this document is to describe the CFR and rice field fishery system and the typology of CFR/RFF locations describing potentially different categories of CFR. This document would be able to help planners or implementers to better optimize investment for enhancement and management of the rice field fishery systems in their target areas.
Issues affecting enhancement better understood and mitigation strategies defined.	For each CFR/RFF system a draft of intervention action plans were developed in early 2013 in a participatory way with relevant stakeholders such as CFR committee, commune council, village chief and community representatives under facilitation from WorldFish and NGO partner's staff. Action plans against each element of RFF system environment (CFRs, connecting channels and rice fields) were discussed and agreed by the stakeholders through a numbers of meetings and workshops.
FiA, NGO and relevant science institutions agree to criteria developed for categories and enhancement strategies.	The 'Ideal scenarios' were developed for each element of the environment (CFRs, connecting channels and rice fields) and for each category of CFR/RFF. The scenarios are a considered view of the ideal state for the environment and its management to meet project objectives of increased fish production, as well

	<p>as maintenance or increase in biodiversity. The ideal scenarios had been agreed by FiA, FiAC, local NGO partners and CFR committees through a series of workshops at provincial and national level.</p>
<p>2. RFF enhancement models validated for future scale out</p>	
<p>Increased fish biomass, abundance and biodiversity demonstrated at 90% of CFR sites selected for sampling.</p>	<p><u>Fish abundance:</u> 2013 & 2014 (BiOM survey): Based on BiOM survey in 2013 & 2014 indicated that 21 out of 40 RFF (53%) showed increment number of fish catch. The average increment is 27 fish/gillnet. 2013 & 2015 (BiOM survey): Based on BiOM survey in 2013 & 2015 indicated that 22 out of 40 RFF (55%) showed increment number of fish catch. The average increment is 27 fish/gillnet. <u>Fish biomass:</u> 2013 & 2014 (BiOM survey): Based on BiOM survey in 2013 & 2014 indicated that 25 out of 40 RFF (63%) showed increment of fish catch. The average increment is 295g/gillnet. 2013 & 2015 (BiOM survey): Based on BiOM survey in 2013 & 2015 indicated that 28 out of 40 RFF (70%) showed increment of fish catch. The average increment is 213g/gillnet.</p>
<p>At each of the RFF categories average production increases by at least 30 kgs/hectare in rice fields by Year 3 and 50 kgs/hectare by Year 4 for 75% of locations</p>	<p>Year 3 (CCM survey): 25 out of 40 RFF (63%) showed increment of fish catch. The average increment is 61 kg/hectare/year. The average fish caught by category was ranged from 21 kg/ha to 57 kg/ha. Most categories showed that the amount of fish caught/ha was higher than the project target. It could be claimed that because of impact of the project supports.</p> <div data-bbox="699 1397 1513 1621" style="border: 1px solid black; height: 100px; width: 100%;"></div> <p>By year 4 (CCM survey): 17 out of 40 RFF (43%) showed increment of fish catch. The average increment is 39 kg/hectare/year. The average fish caught by category was ranged from 21 kg/ha to 57 kg/ha. Most categories showed that the amount of fish caught/ha was less than the project targeted because of the server drought in 2015.</p>

<p>Biodiversity increases at 50% sites by Yr 3. And 75% by Yr. 4.</p>	<p><u>Biodiversity (water birds):</u></p> <p>2013 & 2014 (BiOM survey): Based on BiOM survey in 2013 & 2014 indicated that 10 out of 40 RFF (25%) showed frequency increment of water bird had been seen during the BiOM surveys.</p> <p>2013 & 2015 (BiOM survey): Based on BiOM survey in 2013 & 2015 indicated that 13 out of 40 RFF (33%) showed frequency increment of water bird had been seen during the BiOM surveys.</p>
<p>80% of households for each RFF category demonstrate 25% increase in income from fish and consume 50% more fish by weight compared to baseline.</p>	<p>Table a: There was 56% of total 587 HH interviewed indicated that they consumed more fish (146kg/HH/year) in 2015 than in 2012 (36 kg/HH/year). It was around three times more than baseline.</p> <p>Table a: Fish consumed more by HHs caught more fish (n: 279HHs)</p> <div data-bbox="703 1122 1513 1308" style="border: 1px solid black; height: 80px; width: 100%;"></div> <p>Table b indicated that their average income got from sold fish in 2015 was estimated around \$ 523. It was around ten times more than baseline.</p> <p>Table b: Income increased from fish sold (n:279 HHs)</p> <div data-bbox="703 1491 1513 1733" style="border: 1px solid black; height: 100px; width: 100%;"></div>

<p>25% households consume more micro-nutrient rich species</p>	<p>Only percentage of households consume more micro-nutrient rich species based on CCM survey in all three years 2013, 2014 and 2015 is stable. It is around 40% of the CCM survey sample size (400 HHs). However, the amount of micro-nutrient rich species has been eaten by sample size HHs between 2013 & 2015 showed an increment from 684.4 g/HH/week to 775.1g/HH/week (13%). This amount mostly gets from wild catch.</p>
<p>Good sustainability achieved by 80% community groups established to oversee management “working well” and supporting themselves during Year 4.</p>	<p>As already stated at the purpose section only 31 out of 40 CFRs/RFFs (77% of CFRs/RFFs) indicated sustainable management.</p>
<p>3. Best practice RFF enhancement models promoted for scale out</p>	

Resourcing and input requirements determined for national level scale out.	Four documents as mentioned in detail at output-3 section of this report are documented for public distribution. Moreover, two videos on importance of RFF and importance of small fish have been posted in WorldFish website.
All national development and research agencies have appropriate documentation for potential understanding of best practice approaches.	Third revision of best practice guideline of CFR/RFF system management has been carried out.
Approaches broadcasted on TV and radio at least once.	Two public awareness raising on importance of RFF and importance of small fish were conducted in Pursat and Kampong Thom province. These events were also been broadcasted on national TV channels. More than 12,000 people participated in these events. Two deputies of provincial governors expressed their thanks to USAID, WorldFish and local NGO partners who had supported fund and implemented the project in the target provinces. They also suggested to USAID and WorldFish to continue the support and expand to other target areas.
At least 2 staff from each project involved in CFi and CFR development participated in exchange programme or hosted by project.	The project organized various exposure visits for government officials, council of ministers, donor representatives, and other visitors such as USAID in Cambodia, USAID from Washington, MRC and FAO staff.
2 papers published in international peer reviewed journals and 8 theses.	In order to enhance the national and international collaboration on academic program development and research in the field of Biodiversity Conservation RFFEP has collaborated with Royal University of Phnom Penh (RUPP) and Royal University of Agriculture (RUA) through engaging 4 M.Sc. students three from the Royal University of Phnom Penh and one student from the Royal University of Agriculture. For detail of the studies see separated reports.

ANNEX V. INTERVIEW GUIDE QUESTIONS

Guide Questions for KII – WFC Assistant National Project Coordinator, Local NGO Partner Representative, and FiA Counterpart on Final Evaluation of Rice Field Fisheries Enhancement Project (RFFEP)

Instruction:

- This interview guide is only applicable to **WFC Assistant National Project Coordinator, Local NGO Staff and FiA Counterpart** who has coordination and management project in target areas.
- The interview may be done through face-to-face interaction.

Introduction

- Hello. My name is _____. We are working as Project Evaluator for Rice Field Fisheries Enhancement (RFFEP). We are conducting a survey to get information and insights from your organization regarding the RFFEP implemented by:
 - ✓ Cambodia Organization for Women Support (COWS) in Kampong Thom Province;
 - ✓ Trail Blazer Cambodia Organization (TCO) in Siem Reap Province;
 - ✓ Village Support Group (VSG) in Battambang Province; and
 - ✓ Akphivath Neary Khmer Organization (ANKO) in Pursat Province.
- We will deeply appreciate if you can devote your time-sharing to us your thoughts on the questions we asked below. You are not obliged to participate in the survey but we hope you will because your views are important. Rest assured that all your answers will remain strictly confidential and be used for research purposes only.
- Thank you very much for your time.

Name of Interviewer:	
Name of Interviewee:	
Position:	
Name of Province:	
Date of Completion of Questionnaire:	_____ / _____ /2016

No.	Questions	Remarks
Overview:		
1	Can you overview (activities and results) of the RFFEP?	
Relevance:		
2	How relevant is the RFFEP to the current CFR needs and direction of the NSDP and FiA Strategic Plan 2010-2019 in Cambodia?	
3	Does Rice Field Fisheries (RFFs) contribute to address the needs of the target communities (men and women)?	
4	Does people consume more fish from rice field system?	
	[] Yes: Why?	
	[] No: What issues that are not consume by the people?	
5	Does people use water in the way was designed for improving fish productivities in CFRs and other	

	by the CFR Committee on Management Plan?	
14	Dose RFFEP interventions improved the capacity of CFR committee on Fund Raising?	
	[] Yes: Why?	
	[] No: What issues that are not address by the CFR Committee on Fund Raising?	
15	What engages have you given an opportunity for female attending/leadership?	
Impact:		
16	What are the observed changes in improving fish productions, household incomes, and food securities?	
17	What real difference has the activity made to the beneficiaries? And levels of people have been affected?	
18	How do the project activities contribute to the Food Security?	
Challenges and Lessons Learnt		
19	What are the Key Challenges for project implementation?	
20	What is the most important Lessons Learnt from implementing the project?	
Sustainability:		
21	Finance – Is there a reliable mechanism to generate enough money to maintain the rice field fishery management and benefit?	
22	Ownership – Do the beneficiaries (men and women) and other stakeholders value the benefit and want to maintain it?	
23	Project to Policy Links – Is there an official policy, if necessary, which recognizes and implements the processes and maintains the institutions, needed to maintain the benefits?	
24	Community Institutional Capacity – Do the necessary community institutions exist and do they have adequate capacity to survive without external support?	
25	What are the main strategies for	

	promoting and sustainability project?	
26	How commitment of Local Authorities (LAs) to provide technical and financial support?	
27	Does CFR Committee raising campaign or contribute to sustain and develop the project achievements?	
28	Does ownership and leadership of the CFR Committees and their members in maintaining the project achievements?	
29	Do you have any suggestions as to how the project could be better promoted?	

Thank you for your most valuable help and kind cooperation!

**Guide Questions for HH – Local Authority (CC or VC), CFR Committee,
and Beneficiary
on
Final Evaluation of Rice Field Fisheries Enhancement Project (RFFEP)**

Introduction

- Hello. My name is _____. We are working as Project Evaluator for Rice Field Fisheries Enhancement (RFFEP). We are conducting a

survey to get information and insights from your organization regarding the RFFEP implemented by:

- ✓ Cambodia Organization for Women Support (COWS) in Kampong Thom Province;
 - ✓ Trail Blazer Cambodia Organization (TCO) in Siem Reap Province;
 - ✓ Village Support Group (VSG) in Battambang Province; and
 - ✓ Akphivath Neary Khmer Organization (ANKO) in Pursat Province.
- We will deeply appreciate if you can devote your time-sharing to us your thoughts on the questions we asked below. You are not obliged to participate in the survey but we hope you will because your views are important. Rest assured that all your answers will remain strictly confidential and be used for research purposes only.
 - Thank you very much for your time.

Instruction:

- This interview guide is only applicable to **Local Authority (CC or VC), CFR Committee, and Beneficiary** who have participation in the training course to strengthen the knowledge and capacity of the representatives of community in term of rice field fishery innovations and other subjects of relevance to food security in target areas.
- The interview may be done through face-to-face interaction.

Name of Interviewer:	
Name of Interviewee:	
Position of Interviewee:	
Name of Province:	
Date of Completion of Questionnaire:	_____ / _____ /2016

No.	Questions	Remarks
Overview:		
1	What is the purpose of the CFR?	
2	What are the activities of the CFR in your village?	
3	[CFR Committee Only] What is your role and responsibility in the CFR?	
Relevance:		
4	How relevant is the RFFEP activities to the current CFR needs?	
5	Does Rice Field Fisheries (RFFs) contribute to address the needs of the target communities (men and women)?	
6	Does people consume more fish from rice field system?	
	[] Yes: Why?	
	[] No: What issues that are not consume by the people?	
7	Does people use water in the way was designed	

No.	Questions	Remarks																																																																						
	for improving fish productivities in CFRs and other agriculture purposes?																																																																							
8	Who get more benefit from this project?																																																																							
Efficiency:																																																																								
9	What trainings have you attended with project? Advantage of CFR/RFF. Micro nutrient fish species. Negative impact of un-appropriate use of pesticide and herbicide.	Other? - - - -																																																																						
What are the most significant changes after the training?																																																																								
	In this village recipient of the rice field fisheries' support from project? Trap pond? Cement Ring?																																																																							
10	Are there any RFF/CFR Projects (outside RFFEP) that being implementation in this village? If any, please detail?																																																																							
11	In your opinion, how did RFF/CFR helped you in solving malnutrition?																																																																							
12	What are the major factors influencing the achievements or non-achievements of the project?																																																																							
	[] Achievements?																																																																							
	[] Not achievements?																																																																							
Effectiveness:																																																																								
13	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td colspan="10">On a scale of 1-10, how would you rate the satisfaction of the CFFEP's achievements to your community?</td> </tr> <tr> <td style="text-align: center;">⊙</td> <td style="text-align: center;">⊙</td> <td style="text-align: center;">⊙</td> <td style="text-align: center;">⊙</td> <td style="text-align: center;">⊙</td> <td style="text-align: center;">⊙</td> <td style="text-align: center;">⊙</td> <td style="text-align: center;">⊙</td> <td style="text-align: center;">⊙</td> <td style="text-align: center;">⊙</td> </tr> <tr> <td style="text-align: center;">1</td> <td style="text-align: center;">2</td> <td style="text-align: center;">3</td> <td style="text-align: center;">4</td> <td style="text-align: center;">5</td> <td style="text-align: center;">6</td> <td style="text-align: center;">7</td> <td style="text-align: center;">8</td> <td style="text-align: center;">9</td> <td style="text-align: center;">10</td> </tr> <tr> <td colspan="5">Failed to satisfy</td> <td colspan="5">Fully satisfied</td> </tr> <tr> <td colspan="5">If < 3, what are the constraints why the indicators were not achieved?</td> <td colspan="5"></td> </tr> <tr> <td colspan="5">If > 7, what are the factors that contributed to its success?</td> <td colspan="5"></td> </tr> <tr> <td colspan="5">If 4-6, what are needed to achieve those activities?</td> <td colspan="5"></td> </tr> </table>	On a scale of 1-10, how would you rate the satisfaction of the CFFEP's achievements to your community?										⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	1	2	3	4	5	6	7	8	9	10	Failed to satisfy					Fully satisfied					If < 3, what are the constraints why the indicators were not achieved?										If > 7, what are the factors that contributed to its success?										If 4-6, what are needed to achieve those activities?										
On a scale of 1-10, how would you rate the satisfaction of the CFFEP's achievements to your community?																																																																								
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If 4-6, what are needed to achieve those activities?																																																																								
14	[CFR Committee Only] Dose RFFEP interventions improved the capacity of CFR Committee on Governance and Management?																																																																							

No.	Questions	Remarks
	<input type="checkbox"/> Yes: Why?	
	<input type="checkbox"/> No: What issues that are not address by the CFR Committee on governance and management?	
15	[CFR Committee Only] Dose CFR Committee has CFR/RFF Management Plan?	
	<input type="checkbox"/> Yes: Why?	
	<input type="checkbox"/> No: Why not?	
16	[CFR Committee Only] Dose CFR Committee has Fund Raising Campaign activity?	
	<input type="checkbox"/> Yes: Why?	
	<input type="checkbox"/> No: Why not?	
17	What engages have you given an opportunity for female attending/leadership?	
18	Do women face any particular constraints or obstacles in their participation of decision-making?	
19	Why do some women participate in the CFR Committee while other women do not?	
Impact:		
20	What are the observed changes in improving fish productions, household incomes, and food securities in your community?	
21	Does rice field fisheries (RFF) constitute a vital source of INCOME and NUTRITION for local citizens?	
	<input type="checkbox"/> Yes: Why?	
	<input type="checkbox"/> No: What issues that are not income and nutrition by the local people?	
22	How do the project activities contribute to the Food Security in your family?	
23	What real difference has been using pesticides and herbicide in the rice field fisheries (RFF)?	
24	What are the observed of illegal fishing in the Rice Field Fisheries and Community Fish Refuge (RFF/CFR) in your community?	
25	If your community has illegal fishing, what do you do?	
26	In your opinion, what are the most significant changes that happened in your lives since the RFFEP was implemented?	
27	Are there more children who like to eat fish (vitamin)? Why?	
Challenges		

No.	Questions	Remarks
28	What are the key challenges for FFR and CFR in your village?	
Sustainability:		
29	Finance – Does CFR Committee or community raising campaign or contribute to sustain and develop the project achievements?	
	<input type="checkbox"/> Yes: How?	
	<input type="checkbox"/> No: What issues that is not contribute by the committee and local people?	
30	Ownership – Do you think your CFR will continue after the project end?	
	<input type="checkbox"/> Why?	
	<input type="checkbox"/> Why not?	
31	Community to Best Practice Links – Did you have participated in local and regional study tours with other CFRs?	
	<input type="checkbox"/> Where?	
	<input type="checkbox"/> Topics?	
32	Community Capacity – Do the necessary community has adequate capacity to survive without external support?	
33	[Local Authority Only] Does commune development plan or commune investment program (CDP/CIP) has proposed budget for support CFR?	
34	What are the main strategies for promoting and sustainability FFR/CFR?	
35	Do you have any suggestions or recommendation as to how the project could be better promoted?	

3 6	[For Community Pond Only] In the last 12 months did your household go fishing in the RFF system? If yes, complete these two tables: Table 1: fish caught.						
	Flooded rice fields (estimated kg)	Canals and Rivers (estimated kg)	Tonle Sap lake (estimated kg)	Flooded Forest (estimated kg))	Reservoir and Lake (estimated kg)	Trap pond (pond in their rice field)	Total kg
Table 2: Other aquatic animal caught							
	Flooded rice fields (estimated kg)	Canals and Rivers (estimated kg)	Tonle Sap lake (estimated kg)	Flooded Forest (estimated kg))	Reservoir and Lake (estimated kg)	Trap pond (pond in their rice field)	Total kg
3 7	[For Community Pond Only] From the total fish and OAA caught above what did you use for?						

Table 3: Fish used				
Consumption fresh (estimated kg)	Sold (estimated kg)	Process (estimated kg)	Other (estimated kg)	Total kg
Table 4: OAA used				
Consumption fresh (estimated kg)	Sold (estimated kg)	Process (estimated kg)	Other (estimated kg)	Total kg
3 8	[For Community Pond Only] How many trap ponds (pond in rice field) do you have? If yes, complete the table below.			
	Pond	Catch (kg/trap pond/year)	How may times do you catch per year	When did you catch if you know the date or season
	1.			
	2.			
	3.			
	Total			
	Fish from trap pond what did you use for? Specify:			
3 9	[For Cement Ring Only] How many cement rings do you have? If yes, complete the table below:			
	Cement ring	Catch (kg/trap pond/year)	How may times do you catch per year	When did you catch if you know the date or season
	1)			
	2)			
	3)			
	Total:			
	Fish from cement ring what did you use for? Specify:			
4 0	Do you get income from fish you caught from rice field system? If yes, what is the income from fisheries used for? (list 3 main uses)			
	1).....			
	2).....			
	3).....			
4	What are your main, second and third of HH income? (Example: Main income from			

1	rice farming, second from fishing and third from selling labor).		
	Income sources		Describe
	1-What is the main income for your HH		
	2-Second income for your HH		
3-Third income for your HH			
4	Complete table below to see the trend of fish catch:		
2	Year	Please ranking from 2012 to 2015, 1: lowest year of fish they caught from rice field system 2:Medium of fish they caught from rice field system 3: Better than medium (Fair) of fish they caught from rice field system 4: Highest year of fish they caught from rice field system	Give reason why get 1, 2, 3 and 4 ranking
	2012		
	2013		
	2014		
	2015		
Thank you for your most valuable help and kind cooperation!			

Guide Questions for HH – Local Authority (CC or VC), CFR Committee, and Beneficiary
on
Final Evaluation of Rice Field Fisheries Enhancement Project (RFFEP)

Introduction

- Hello. My name is _____. We are working as Project Evaluator for Rice Field Fisheries Enhancement (RFFEP). We are conducting a survey to get information and insights from your organization regarding the RFFEP implemented by:
 - ✓ Cambodia Organization for Women Support (COWS) in Kampong Thom Province;
 - ✓ Trail Blazer Cambodia Organization (TCO) in Siem Reap Province;
 - ✓ Village Support Group (VSG) in Battambang Province; and
 - ✓ Akphivath Neary Khmer Organization (ANKO) in Pursat Province.
- We will deeply appreciate if you can devote your time-sharing to us your thoughts on the questions we asked below. You are not obliged to participate in the survey but we hope you will because your views are important. Rest assured that all your answers will remain strictly confidential and be used for research purposes only.
- Thank you very much for your time.

Instruction:

- This interview guide is only applicable to **Local Authority (CC or VC), CFR Committee, and Beneficiary** who have participation in the training course to strengthen the knowledge and capacity of the representatives of community in term of rice field fishery innovations and other subjects of relevance to food security in target areas.
- The interview may be done through face-to-face interaction.

Name of Interviewer:	
Name of Interviewee:	
Position of Interviewee:	
Name of Province:	
Date of Completion of Questionnaire:	_____ / _____ /2016

No.	Questions	Remarks
Overview:		
1	What is the purpose of the CFR?	
2	What are the activities of the CFR in your village?	
3	[CFR Committee Only] What is your role and responsibility in the CFR?	
Relevance:		
4	How relevant is the RFFEP activities to the current CFR needs?	
5	Does Rice Field Fisheries (RFFs) contribute to address the needs of the target communities (men and women)?	
6	Does people consume more fish from rice field system?	
	<input type="checkbox"/> Yes: Why?	
	<input type="checkbox"/> No: What issues that are not consume by the people?	
7	Does people use water in the way was designed for improving fish productivities in CFRs and other agriculture purposes?	
8	Who get more benefit from this project?	
Efficiency:		
9	What trainings have you attended with project?	Other?
	Advantage of CFR/RFF.	-
	Micro nutrient fish species.	-
	Negative impact of un-appropriate use of pesticide and herbicide.	-
	What are the most significant changes after the training?	
	In this village recipient of the rice field fisheries' support from project? Trap pond? Cement Ring?	
10	Are there any RFF/CFR Projects (outside	

No.	Questions	Remarks
	RFFEP) that being implementation in this village? If any, please detail?	
11	In your opinion, how did RFF/CFR helped you in solving malnutrition?	
12	What are the major factors influencing the achievements or non-achievements of the project?	
	[] Achievements?	
	[] Not achievements?	
Effectiveness:		
13	<div style="border: 1px solid black; padding: 5px;"> <p>On a scale of 1-10, how would you rate the satisfaction of the CFFEP's achievements to your community?</p> <p> <input type="radio"/> 1 <input type="radio"/> 2 <input type="radio"/> 3 <input type="radio"/> 4 <input type="radio"/> 5 <input type="radio"/> 6 <input type="radio"/> 7 <input type="radio"/> 8 <input type="radio"/> 9 <input type="radio"/> 10 </p> <p>Failed to satisfy Fully satisfied</p> </div> <p>If < 3, what are the constraints why the indicators were not achieved?</p> <p>If > 7, what are the factors that contributed to its success?</p> <p>If 4-6, what are needed to achieve those activities?</p>	
14	[CFR Committee Only] Dose RFFEP interventions improved the capacity of CFR Committee on Governance and Management?	
	[] Yes: Why?	
	[] No: What issues that are not address by the CFR Committee on governance and management?	
15	[CFR Committee Only] Dose CFR Committee has CFR/RFF Management Plan?	
	[] Yes: Why?	
	[] No: Why not?	
16	[CFR Committee Only] Dose CFR Committee has Fund Raising Campaign activity?	
	[] Yes: Why?	
	[] No: Why not?	
17	What engages have you given an opportunity	

No.	Questions	Remarks
	for female attending/leadership?	
18	Do women face any particular constraints or obstacles in their participation of decision-making?	
19	Why do some women participate in the CFR Committee while other women do not?	
Impact:		
20	What are the observed changes in improving fish productions, household incomes, and food securities in your community?	
21	Does rice field fisheries (RFF) constitute a vital source of INCOME and NUTRITION for local citizens?	
	<input type="checkbox"/> Yes: Why?	
	<input type="checkbox"/> No: What issues that are not income and nutrition by the local people?	
22	How do the project activities contribute to the Food Security in your family?	
23	What real difference has been using pesticides and herbicide in the rice field fisheries (RFF)?	
24	What are the observed of illegal fishing in the Rice Field Fisheries and Community Fish Refuge (RFF/CFR) in your community?	
25	If your community has illegal fishing, what do you do?	
26	In your opinion, what are the most significant changes that happened in your lives since the RFFEP was implemented?	
27	Are there more children who like to eat fish (vitamin)? Why?	
Challenges		
28	What are the key challenges for FFR and CFR in your village?	
Sustainability:		
29	Finance – Does CFR Committee or community raising campaign or contribute to sustain and develop the project achievements?	
	<input type="checkbox"/> Yes: How?	
	<input type="checkbox"/> No: What issues that is not contribute by the committee and local people?	
30	Ownership – Do you think your CFR will continue after the project end?	
	<input type="checkbox"/> Why?	
	<input type="checkbox"/> Why not?	

No.	Questions	Remarks
31	Community to Best Practice Links – Did you have participated in local and regional study tours with other CFRs? [] Where? [] Topics?	
32	Community Capacity – Do the necessary community has adequate capacity to survive without external support?	
33	[Local Authority Only] Does commune development plan or commune investment program (CDP/CIP) has proposed budget for support CFR?	
34	What are the main strategies for promoting and sustainability FFR/CFR?	
35	Do you have any suggestions or recommendation as to how the project could be better promoted?	

3 6	[For Community Pond Only] In the last 12 months did your household go fishing in the RFF system? If yes, complete these two tables: Table 1: fish caught.						
	Flooded rice fields (estimated kg)	Canals and Rivers (estimated kg)	Tonle Sap lake (estimated kg)	Flooded Forest (estimated kg))	Reservoir and Lake (estimated kg)	Trap pond (pond in their rice field)	Total kg
	Table 2: Other aquatic animal caught						
	Flooded rice fields (estimated kg)	Canals and Rivers (estimated kg)	Tonle Sap lake (estimated kg)	Flooded Forest (estimated kg))	Reservoir and Lake (estimated kg)	Trap pond (pond in their rice field)	Total kg
3 7	[For Community Pond Only] From the total fish and OAA caught above what did you use for?						
	Table 3: Fish used						
	Consumption fresh (estimated kg)	Sold (estimated kg)	Process (estimated kg)	Other (estimated kg))	Total kg		
	Table 4: OAA used						

	Consumption fresh (estimated kg)	Sold (estimated kg)	Process (estimated kg)	Other (estimated kg)	Total kg
3 8	[For Community Pond Only] How many trap ponds (pond in rice field) do you have? If yes, complete the table below.				
	Pond	Catch (kg/trap pond/year)	How many times do you catch per year	When did you catch if you know the date or season	
	1.				
	2.				
	3.				
	Total				
	Fish from trap pond what did you use for? Specify:				
3 9	[For Cement Ring Only] How many cement rings do you have? If yes, complete the table below:				
	Cement ring	Catch (kg/trap pond/year)	How many times do you catch per year	When did you catch if you know the date or season	
	1)				
	2)				
	3)				
	Total:				
	Fish from cement ring what did you use for? Specify:				
4 0	Do you get income from fish you caught from rice field system? If yes, what is the income from fisheries used for? (list 3 main uses) 1)..... 2)..... 3).....				
4 1	What are your main, second and third of HH income? (Example: Main income from rice farming, second from fishing and third from selling labor).				
	Income sources		Describe		
	1-What is the main income for your HH				
	2-Second income for your HH				

ANNEX VII. LIST OF DOCUMENTS/MATERIALS REVIEWED

- MAFF/FiA Strategic Planning Framework 2010-2019;
- The WorldFish/REFFEP Project Document, dated 2013;
- The WorldFish/REFFEP Annual Progress Report 2012-2016;
- The WorldFish/REFFEP Project Completion Report 2012-2016;
- The WorldFish/REFFEP Annual Work Plan 2012-2016;
- The WorldFish/REFFEP on “How important are the rice field fisheries” A Livelihood Baseline Survey around the Tonle Sap Lake for the Rice Field Fisheries Enhancement Project.” Dated: 2013;
- The WorldFish and Inland Fisheries Research and Development Institute on “Cambodia Inland Fisheries”, dated: 2005;
- Cambodia-IRRI-Australia Project (IRRI)/Rice Fisheries Handbook;
- MRC/Danish International Development Assistance on the Report on Household Survey “Socio-Economic Assessment of Freshwater Capture Fisheries in Cambodia” by Ahmed M., Hap N., Ly, V., and Tiogco. M, dated: 1998;