

KINGDOM OF CAMBODIA

Nation Religion King



FISHERIES ADMINISTRATION



## **The Assessment of the Effectiveness of Community Fisheries in Cambodia**

Cambodia Programme for Sustainable and Inclusive Growth in the Fisheries Sector:  
Capture Component (CAPFISH-Capture)

March 2023

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The author also would like to express sincere thanks to the Director General of the FiA and the co-chair of the TWGFi for leading the TWGFi in discussions on fisheries-related issues including the methodology of the baseline assessment, which took so many meetings to discuss and finalize the method which the CFi effectiveness assessment in 2022 used as its foundation.

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Phnom Penh 24 March 2023



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## Executive Summary

Based on the financing agreement between the European Union and the Royal Government of Cambodia, a target was set to have 34% of registered CFIs qualify as strong in 2022. In total, an assessment of 202 registered communities fisheries in 17 provinces in Cambodia was conducted using pre-designed focus group discussion questions (FGD). The assessment was based on the data collecting tool that was developed in 2018 to assess CFI effectiveness, along with additional questions that helped improve the tool. A scoring system was applied for ranking all responses in relation to four main CFI effectiveness assessment criteria for quantitative data analysis. These criteria are: 1) CFI management and operations; 2) CFI Committee processes for engaging communities; 3) Benefits/impacts of Cfi; and 4) CFI sustainability. Ratings were generated for each variable and the combined average scores of all criteria were used to rank each CFI as strong, moderate, or weak. The results of the analysis showed that 39% (78 CFIs) were strong, 51% (103 CFIs) moderate, and 10% (21 CFIs) were weak. Based on these results, the target was considered as solidly achieved. It was also found that ratings for each of the four key criteria in 2022 were slightly higher than those in 2018, especially for the criterion focussed on the CFI Committees' processes for community engagement.

## 1. Introduction

### 1.1 Background

The Royal Government of Cambodia (RGC) has continuously reformed the fisheries sector since 2001, including approximately 1 million hectares of fishing lots, enabling local people to engage in the sustainable and equitable management and use of resources through organizing community fisheries (CFi). At present, there are 516 CFis organized as community-based organisations (CBOs) in both inland and coastal zones of the Kingdom of Cambodia. The CFis have been supported by the Fisheries Administration (FiA), non-governmental organizations (NGO), and development partners (DP), including EU-funded budgets. These efforts have successfully strengthened the roles of CFis and improved CFi co-management mechanisms. The total number of CFi has remained stable since 2019. Of the 516 CFis, 447 are officially registered, with a total of 332,168 CFi members (35% female) and 4,497 elected CFi Committee members (15.6% female). A total of 150 CFis received small grant support from FiA.

To determine the effectiveness of the CFi approach, in 2018, the Community Fisheries Development Department (CFDD) of FiA conducted a CFi effectiveness assessment in 17 provinces. The results of assessment indicated that 9% of CFi were classified as well-functioning or strong, 52% as moderate, and 39% as weak. In 2022, CFDD conducted a subsequent CFi effectiveness assessment in the same 17 provinces, under the technical support of FAO CAPFISH-Capture. The purpose of this second assessment was to understand changes in the effectiveness of the CFis since 2018.

### 1.2 Objectives

The main objectives of the follow-up assessment designed and conducted in 2022 were to determine the effectiveness of the registered CFis, to compare the assessments with the baselines established through the 2018 CFi effectiveness assessment, and to use the results of the new assessment to determine whether the improvement target stated in the Financing Agreement between the EU and the RGC has been met. The target was to have 34% of registered CFis qualified as strong in 2022.

## 2. Assessment Methodology

### 2.1 Data collection

The assessment on the effectiveness of CFis was conducted by Fisheries Administration Cantonments in 17 provinces<sup>1</sup> that have registered CFis. Supervised and advised by the Community Fisheries Development Department (CFDD), the data collection and assessment was conducted with technical support from the technical staffs of the EU-PGA-FiA.

The methodology of the CFi effectiveness assessment in 2022 was based on that of the assessment in 2018. The CFi selection and data collection methodology of the 2018 assessment were submitted to and subsequently discussed and adopted by the Conservation and Economic Sub-group (TWG-CFi)

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<sup>1</sup> Five provinces without CFis (Palin, Kampong Speu, Oddar Meanchey, Preah Vihear, and Phnom Penh) were not included. 115 CFis (out of a total of 119) located in Kratie and Stung Treng provinces were not selected for further data collection because the CFis in these two provinces were covered by another fishery project funded by the World Bank and did not receive EU budget support. The World Bank had its own methodology to assess the effectiveness of the CFis, which was not comparable to the one used by FiA. Kandal was also not included as it did not receive budget support. Only 1 out of 14 CFis in Ratanakiri was included due to budget constraints during the field data collection.



of the Technical Working Group on Fisheries (TWGFi). With the support of the CAPFISH Capture, extensive discussion sessions were conducted and revisions made to the data collection methodology, including FGD questions based on all questions in 2018 and additional questions to improve assessments of CFI effectiveness (Annex 1). This revised methodology was finally approved by the Sub-TWG on Conservation and Economic in 2021.

The field data collection for the assessment took place over 6 months, from May to October 2022. Due to limited resources, 202 registered CFIs located in 17 provinces (Prey Veng, Takeo, Kampong Cham, Tboung Khmum, Kampong Chhnang, Pursat, Battambang, Kampong Thom, Siem Reap, Banteay Meanchey, Kep, Kampot, Preah Sihanouk, Koh Kong, Kratie, Stung Treng and Ratanakiri) were selected from among the 447 registered CFIs in the entire country for conducting FGD discussion sessions. The sample size of 202 CFIs was considered sufficiently large and representative for the total number of 447 registered, with the result statistically significant at the 95% confidence level.

The data collection took place based on a Focus Group Discussion (FGD) method involving 10 CFI members (excluding chief, vice-chiefs, and CFI committee's members) from each community fisheries. The chief, vice-chiefs, and CFI committee's members were not invited to participate in the FGD discussions to prevent biased information about the CFI. The only exception was for the 3 finance-related questions for CFC (Q5.2b, Q5.2.c, and Q5.3.d). These questions were posed to the CFI committee since only they had the knowledge to respond accurately.

In each FGD session, a technical group consisted of one person from the FiA-CFDD and two people from a Fisheries Administration Cantonment (FIAC) serving as facilitators. Prior to the field work, a training course and pre-testing were conducted. The FiA staff acted as the supervisor, both advising and assisting the FIACs staff in conducting the FGD sessions and data incorporation.

The FGD questions contained four main criteria: 1. community fisheries management and operations; 2. CFC's processes for community engagement; 3. benefits/impacts of CFI activities; and 4. the CFI sustainability. Within each criterion, there were detailed but simple and easily understood questions.

To answer each question, participants (members of a CFI) were asked to choose only one among three choices: 1 = weakness/less/no; 3 = moderate/same/some; or 5 = strong/better/more/yes.

## 2.2 Data input and analysis

The data from each of the FGD sessions were incorporated into a pre-designed data template using EXCEL Spreadsheet (Annex 2). The analysis first averaged each of the four criteria. A total average was then calculated for each of the CFIs by combining the results from all 4 criteria. The scoring result of a CFI fell into one of the three types of the CFIs below. These categories were fully discussed within and adopted by members of the CFDD and the technical experts. The calculation was conducted for individual CFIs, as well as at both provincial and national levels.

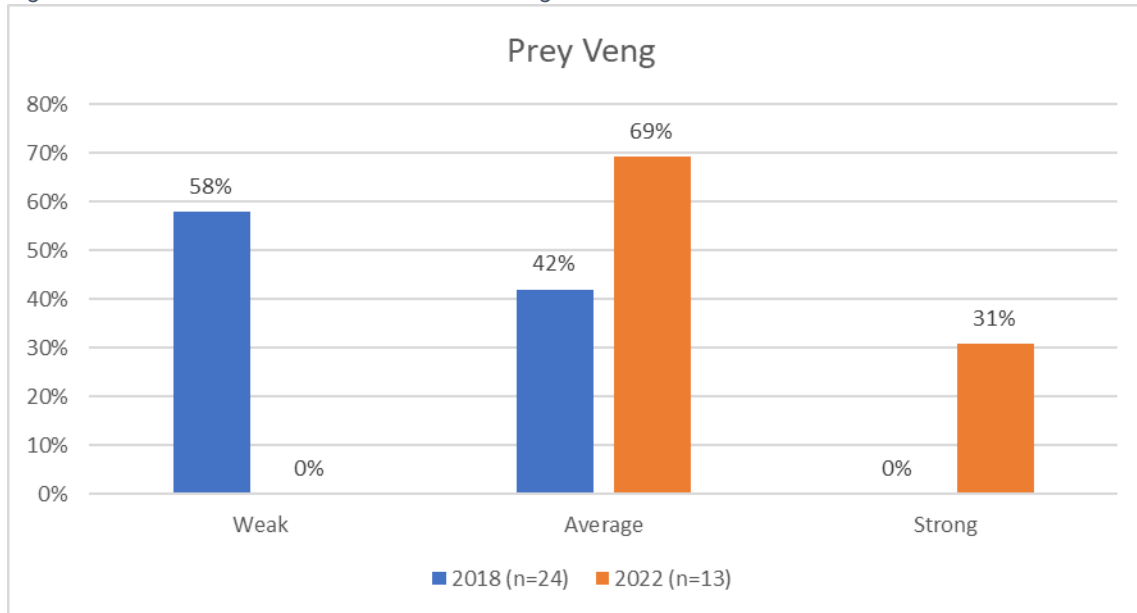
- Type (1) "Weak": Score <3
- Type (2) "Average": Score 3-4
- Type (3) "Strong": Score >4.

### 3. Results and findings

#### 3.1. Chaktomuk Region

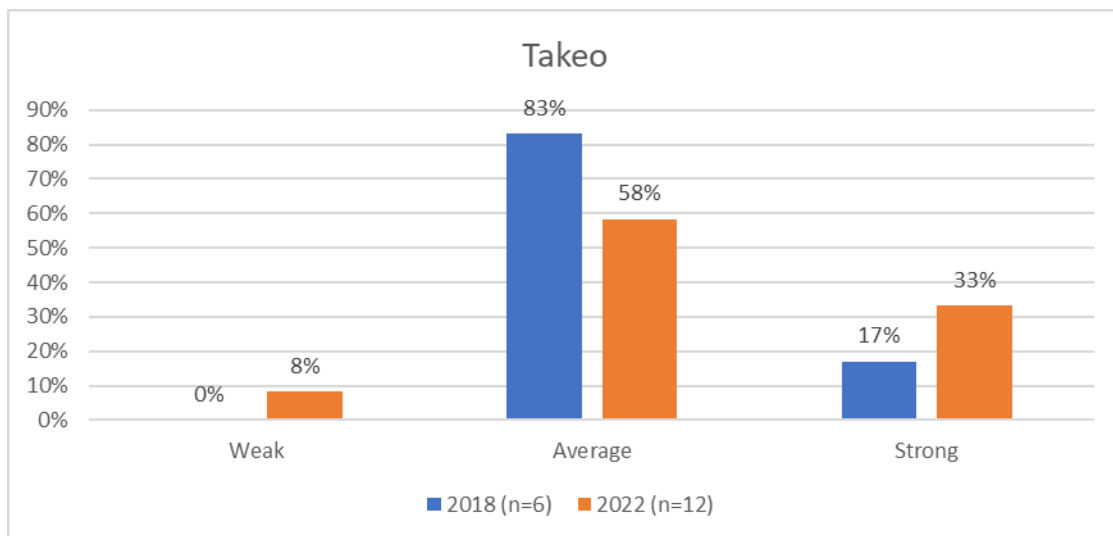
**Prey Veng** province is located in the Chaktomuk region. There were 24 registered CFIs. Thirteen CFIs were selected as the sample of the assessment. The results of assessment in Prey Veng indicated that 31% of CFIs were strong, 69% moderate, and 0% weak (Figure 1).

Figure 1: The result of CFI assessment in Pre Veng in 2022 vs 2018



**Takeo** province is located in the Chaktomuk region. There were 12 registered CFIs and all of them were selected for assessment. The result showed that 33% of CFIs were strong, 58% moderate, and 8% weak (Figure 2).

Figure 2: The result of CFI assessment in Takeo in 2022 vs 2018

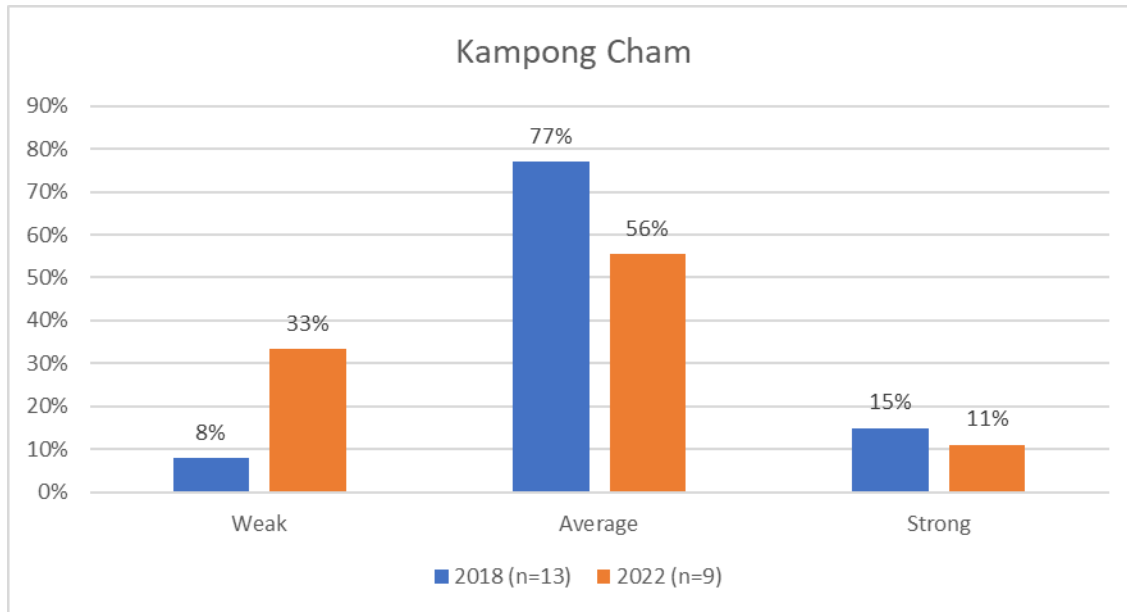




### 3.2. Mekong Region

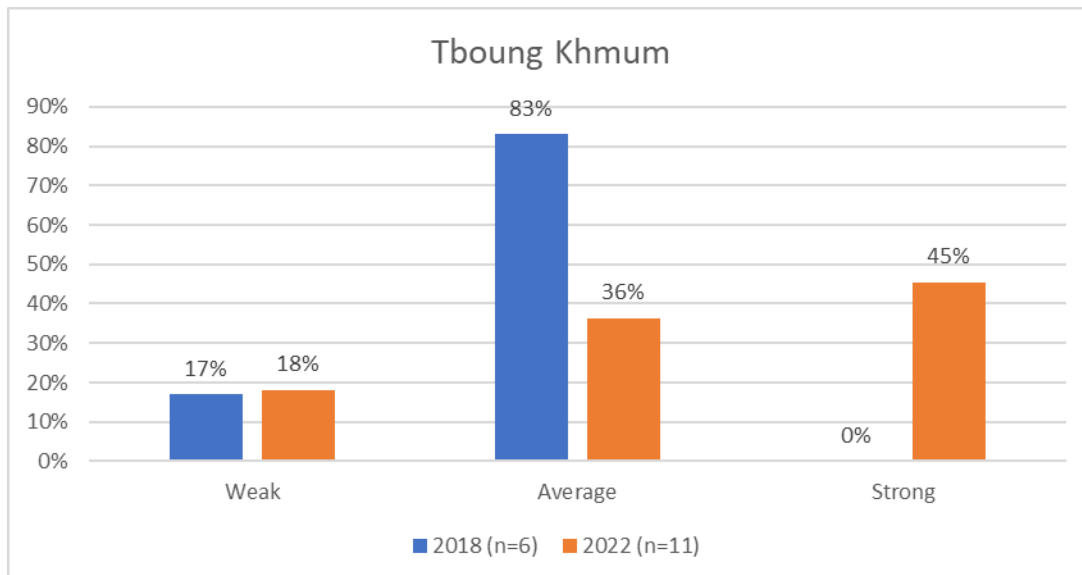
**Kampong Cham** province is located in the Mekong Region. There were 13 registered CFIs. Nine CFIs were selected as the sample for assessment. The results of assessment in Kampong Cham indicated that 11% of CFIs were strong, 56% moderate, and 33% weak (Figure 3).

Figure 3: The result of CFI assessment in Kampong Cham in 2022 vs 2018



**Tboung Khmum** province is located in the Mekong region. There were 14 registered CFIs. Eleven CFIs were selected as the sample of the assessment. The results showed that 45% of CFI were strong, 36% moderate, and 18% weak (Figure 4).

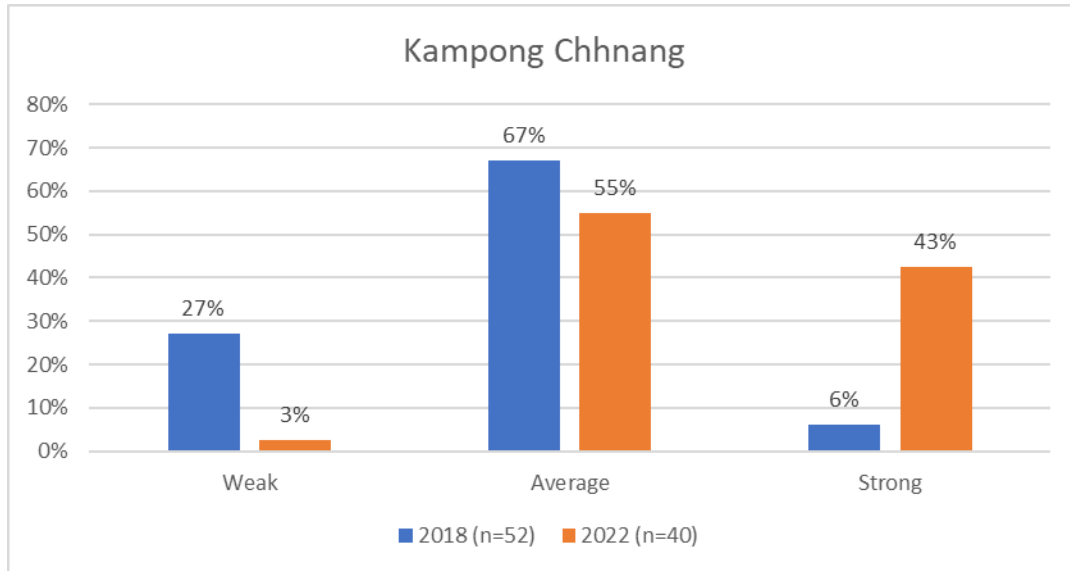
Figure 4: The result of CFI assessment in Tboung Khmum in 2022 vs 2018



### 3.3. Tonle Sap lake

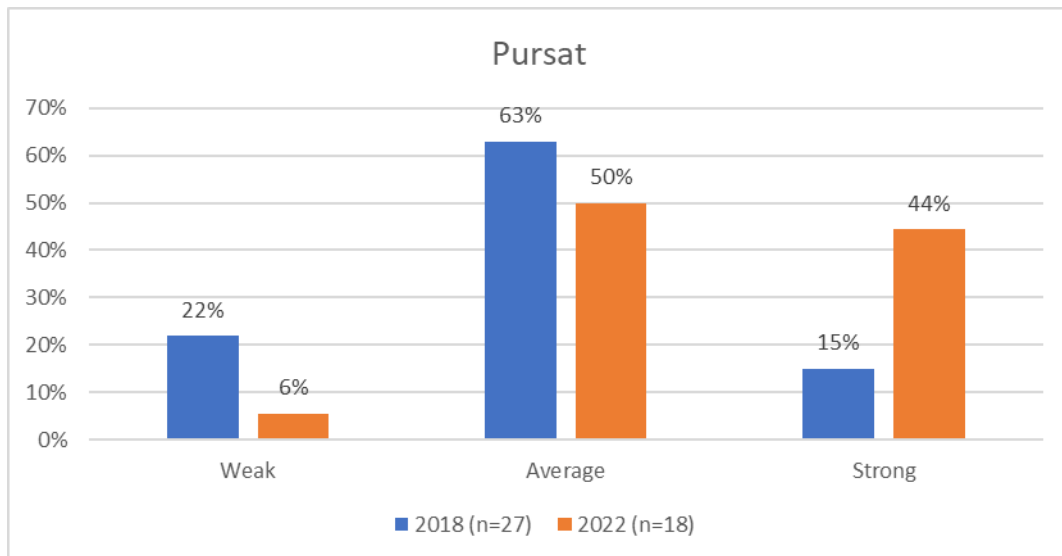
**Kampong Chhnang** is one of the provinces located in Tonle Sap. There were 54 registered CFIs in this province. Forty of registered Cfis were selected as the sample of the assessment. The results of assessment in this province indicated that 43% of CFIs were strong, 55% moderate, and 3% week (Figure 5).

Figure 5: The result of CFI assessment in Kampong Chhnang in 2022 vs 2018



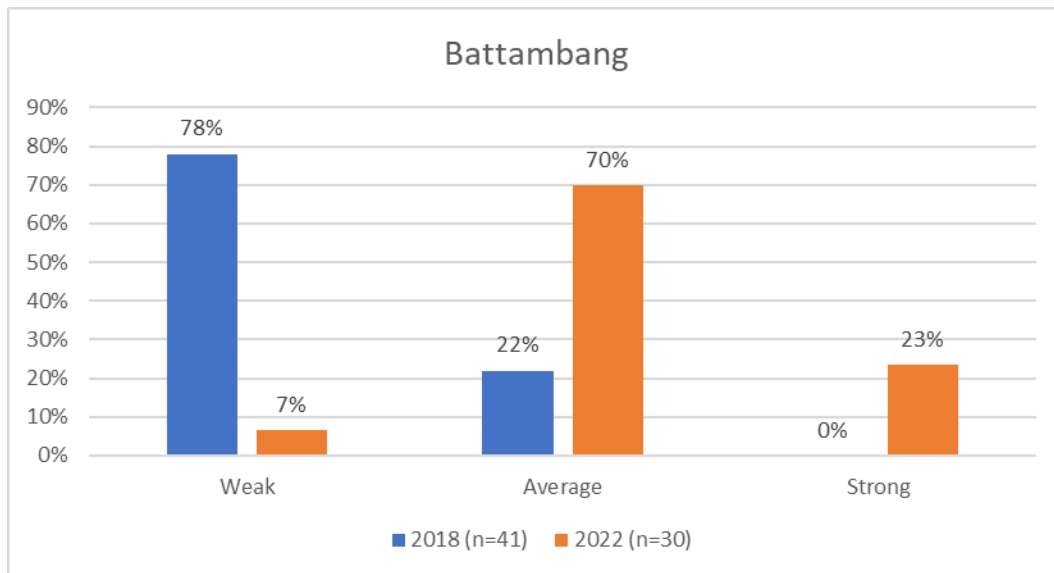
**Pursat** is another province located in the Tonle Sap Region. There were 32 registered CFIs. Eighteen CFIs were selected as the sample of the assessment. The results of assessment showed that 44% of CFIs are strong, 50% moderate, and 6% week (Figure 6).

Figure 6: The result of CFI assessment in Pursat in 2022 vs 2018



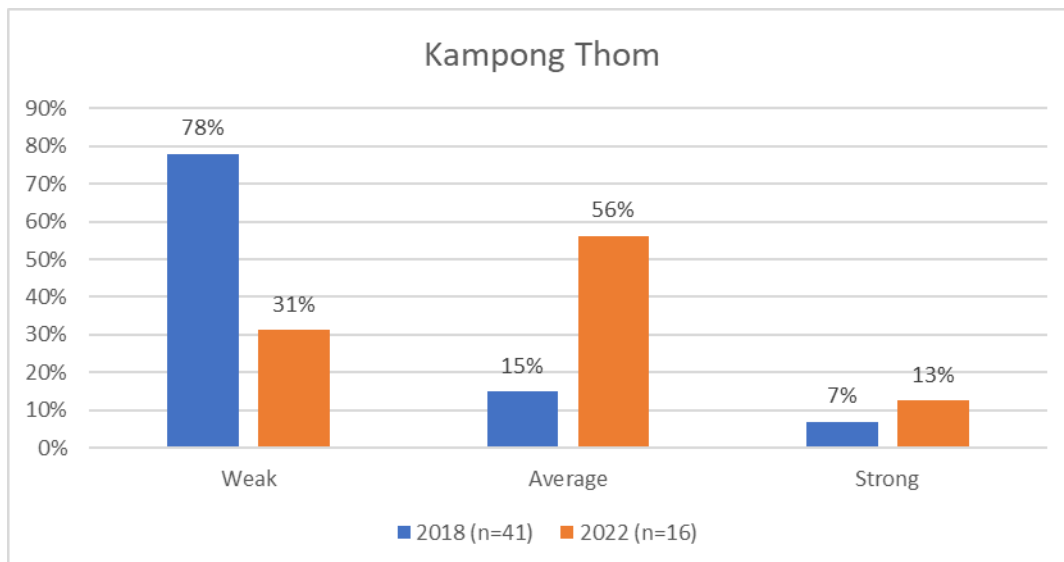
**Battambang** province is also located in Tonle Sap Region. There are 42 registered CFIs. Thirty CFIs were selected as the sample of the assessment. The results of assessment in this province indicated that 23% of CFIs are strong, 70% moderate, and 7% week (Figure 7).

Figure 7: The result of CFI assessment in Battambang in 2022 vs 2018



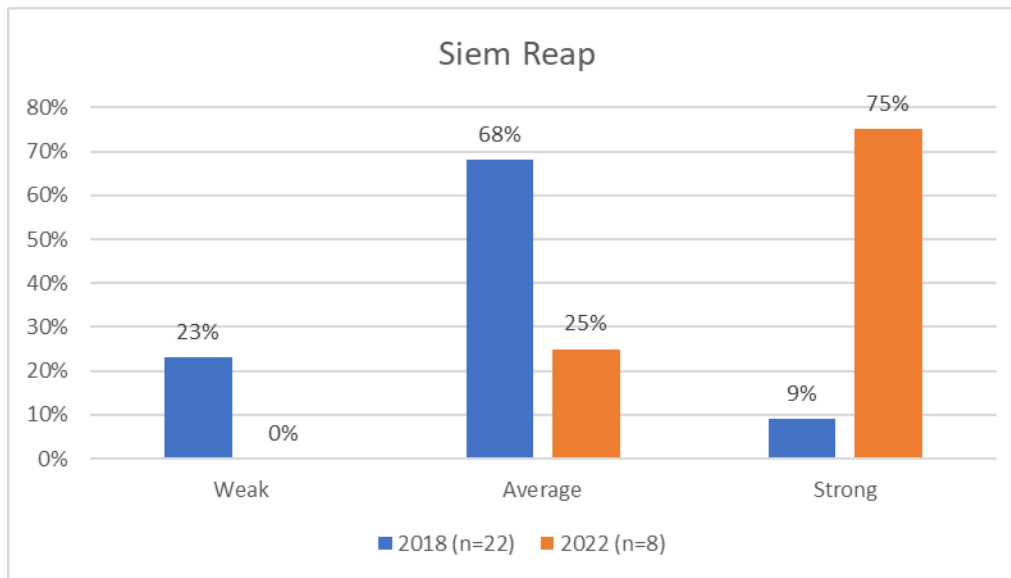
**Kampong Thom** province is also located in Tonle Sap Region. There are 40 registered CFIs. Sixteen CFIs were selected as the sample of the assessment. The results of assessment in this province indicated that 13% of CFIs were strong, 56% moderate, and 31% week (Figure 8).

Figure 8: The result of CFI assessment in Kampong Thom in 2022 vs 2018



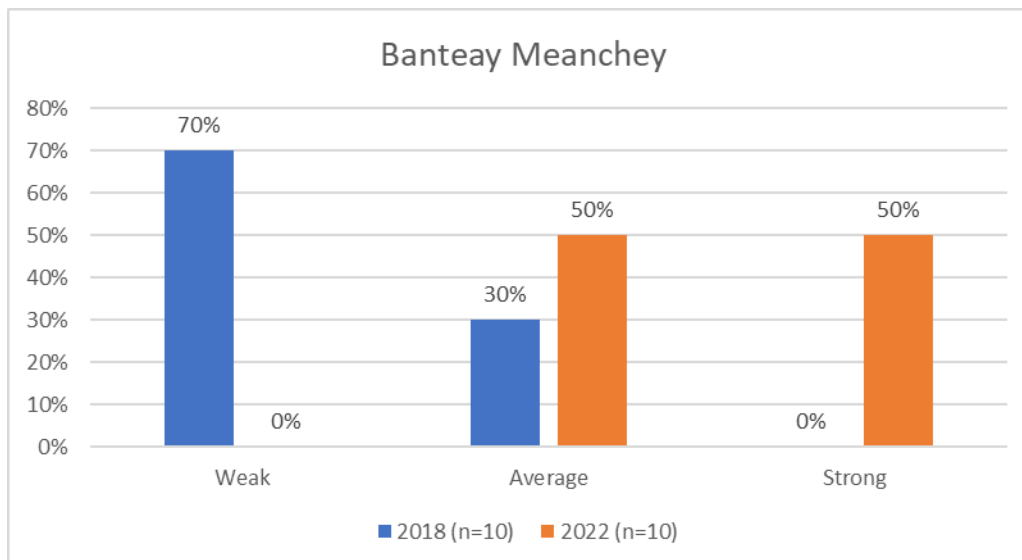
**Siem Reap** is also located in Tonle Sap Region. There are 22 registered CFIs. Eight were selected as the sample of the assessment. The results of assessment in this province indicated that 75% of CFIs were strong, 25% moderate, and 0% week (Figure 9).

Figure 9: The result of CFI assessment in Siem Reap in 2022 vs 2018



**Banteay Meanchey** province is also located in Tonle Sap Region. There are 17 registered CFIs. 10 were selected as the sample of the assessment. The results of assessment in this province indicated that 50% of CFIs were strong, 50% moderate, and 0% week (Figure 10).

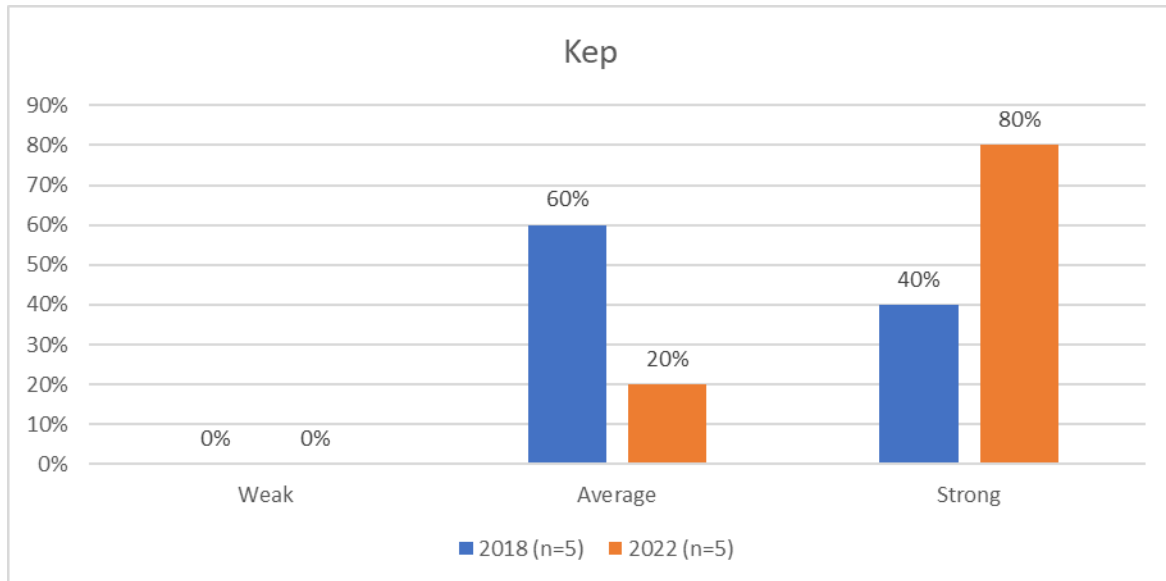
Figure 10: The result of CFI assessment in Banteay Meanchey in 2022 vs 2018



### 3.4. Coastal Region

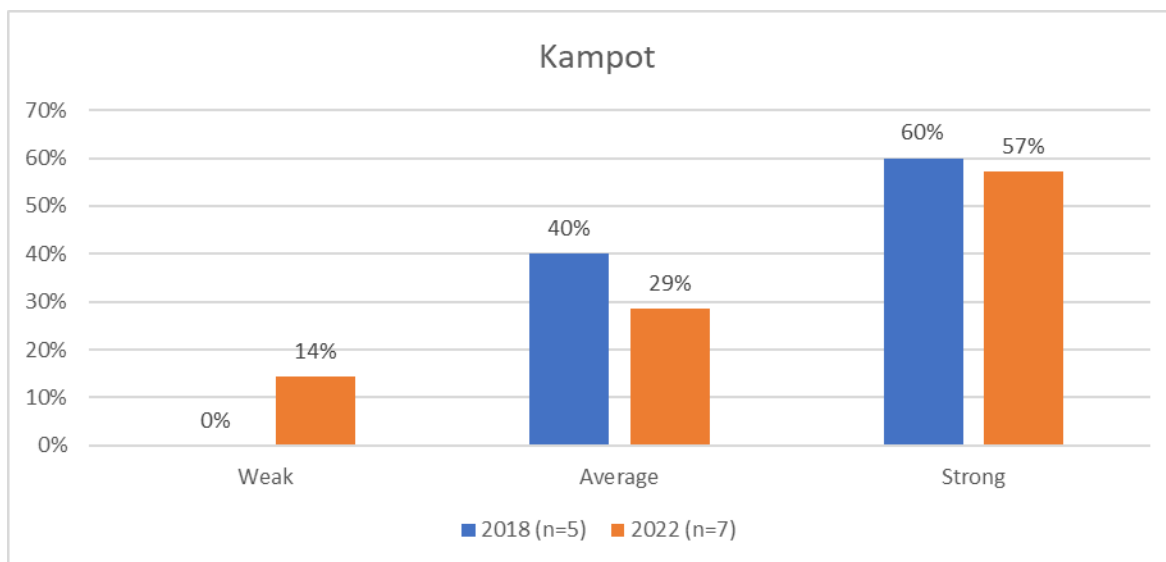
**Kep province** is located in the coastal region. There were 5 registered CFIs. All of CFIs were selected as the sample of the assessment. The results of assessment in Kep province indicated that 80% of CFIs are strong, 20% moderate, and 0% week (Figure 11).

Figure 11: The result of CFI assessment in Kep in 2022 vs 2018



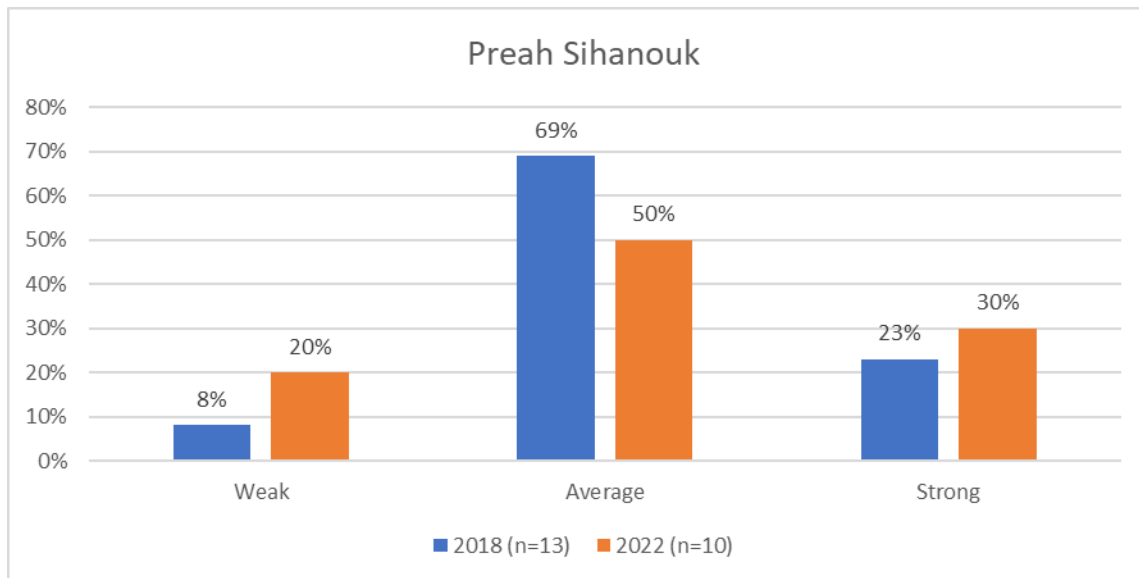
**Kampot** is another province in the coastal region. There are 7 registered CFIs. All of them were selected as the sample of the assessment. The results of assessment in Kampot province indicated that 57% of CFIs were strong, 29% moderate, and 14% week (Figure 12).

Figure 12: The result of CFI assessment in Kampot in 2022 vs 2018



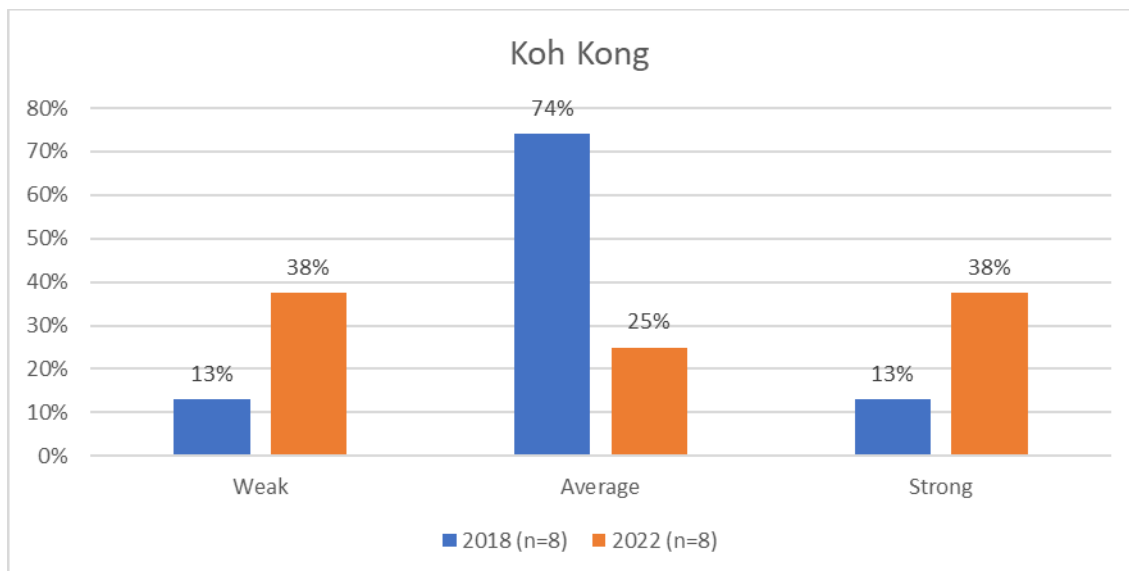
**Preah Sihanouk** province is also located in coastal region. There were 13 registered CFIs. Ten CFIs were selected as the sample of the assessment. The results of assessment in this province indicated that 30% of CFIs are strong, 50% moderate, and 20% week (Figure 13).

Figure 13: The result of CFI assessment in Preah Sihanouk in 2022 vs 2018



**Koh Kong** province is located in the coastal region. There are 14 registered CFIs. Eight CFIs were selected as the sample of the assessment. The results of assessment in Koh Kong indicated that 38% of CFIs were strong, 25% moderate, and 38% week (Figure 14).

Figure 14: The result of CFI assessment in Koh Kong in 2022 vs 2018





### 3.5. Summary of all results

The data collection for registered CFIs in the 17 provinces in 2022 showed that 39% (78 CFIs) were strong, 51% (103 CFIs) moderate, and 10% (21 CFIs) were weak. In comparing the 2022 results with those from 2018, while roughly half of the CFIs in both assessments were assessed as moderate, the overall number of strong CFIs increased in 2022 while that of weak CFIs dropped. The results of these assessments indicate that the proportions of strong and weak CFIs have reversed, with weak CFIs decreasing from 39% in 2018 to 10% in 2022, and strong CFIs increasing from 9% in 2018 to 39% in 2022 (Figure 15). Therefore, the target of 34% strong CFIs was met.

Figure 15: CFI Effectiveness Assessment in 2018 vs 2022

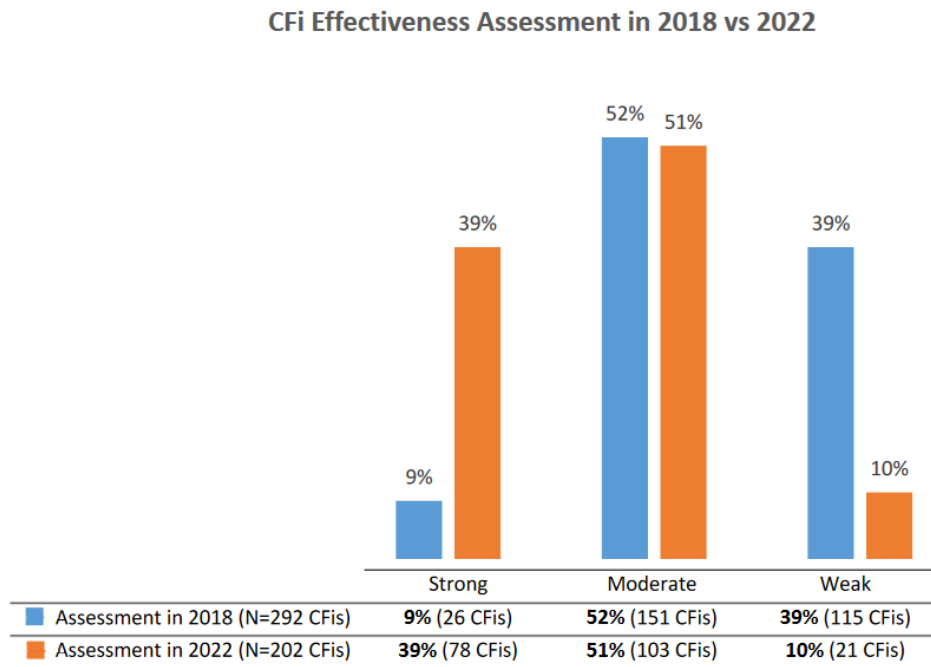


Table 1: Summary result of CFI assessment in 2022 by province

S.N	Regional	English	CFI Registered	Survey 2018 (n)	Survey 2022 (n)	% Survey 2022 to CFI Register	Weak 2022 (n)	Average 2022 (n)	Strong 2022 (n)	% Weak 2022	% Average 2022	% Strong 2022	Total
1	Chaktomuk	Phnom Penh											
2	Chaktomuk	Kandal	5	3		0%							
3	Chaktomuk	Prey Veng	28	24	13	46%	0	9	4	0%	69%	31%	100%
4	Chaktomuk	Takeo	12	6	12	100%	1	7	4	8%	58%	33%	100%
5	Chaktomuk	Svay Rieng	1										
<b>sub-total Chaktomuk</b>			<b>46</b>	<b>33</b>	<b>25</b>	<b>54%</b>	<b>1</b>	<b>16</b>	<b>8</b>	<b>4%</b>	<b>64%</b>	<b>32%</b>	<b>100%</b>
6	Mekong	Kampong Cham	13	13	9	69%	3	5	1	33%	56%	11%	100%
7	Mekong	Tboung Khmum	14	6	11	79%	2	4	5	18%	36%	45%	100%
8	Mekong	Kratie	63		2	3%	0	0	2	0%	0%	100%	100%
9	Mekong	Stung Treng	52		2	4%	0	0	2	0%	0%	100%	100%
10	Mekong	Ratanak Kiri	14	14	1	7%	0	0	1	0%	0%	100%	100%
11	Mekong	Mondul Kiri	3	2		0%							
<b>sub-toal Mekong</b>			<b>159</b>	<b>35</b>	<b>25</b>	<b>16%</b>	<b>5</b>	<b>9</b>	<b>11</b>	<b>20%</b>	<b>36%</b>	<b>44%</b>	<b>100%</b>
12	Southern	Kampong Chhnang	54	52	40	74%	1	22	17	3%	55%	43%	100%
13	Southern	Pursat	32	27	18	56%	1	9	8	6%	50%	44%	100%
14	Southern	Battambang	42	41	30	71%	2	21	7	7%	70%	23%	100%
15	Southern	Pailin											
16	Southern	Kampong Speu											
<b>sub-toal Southern</b>			<b>128</b>	<b>120</b>	<b>88</b>	<b>69%</b>	<b>4</b>	<b>52</b>	<b>32</b>	<b>5%</b>	<b>59%</b>	<b>36%</b>	<b>100%</b>
17	Northern	Kampong Thom	40	41	16	40%	5	9	2	31%	56%	13%	100%
18	Northern	Siemreap	22	22	8	36%	0	2	6	0%	25%	75%	100%
19	Northern	Banteay Meanchey	17	10	10	59%	0	5	5	0%	50%	50%	100%
20	Northern	Oddar Meanchey											
21	Northern	Preah Vihear											
<b>sub-toal Northern</b>			<b>79</b>	<b>73</b>	<b>34</b>	<b>43%</b>	<b>5</b>	<b>16</b>	<b>13</b>	<b>15%</b>	<b>47%</b>	<b>38%</b>	<b>100%</b>
22	Marine	Kep	5	5	5	100%	0	1	4	0%	20%	80%	100%
23	Marine	Kampot	7	5	7	100%	1	2	4	14%	29%	57%	100%
24	Marine	Preah Sihanouk	13	13	10	77%	2	5	3	20%	50%	30%	100%
25	Marine	Koh Kong	10	8	8	80%	3	2	3	38%	25%	38%	100%
<b>sub-toal Marine</b>			<b>35</b>	<b>31</b>	<b>30</b>	<b>86%</b>	<b>6</b>	<b>10</b>	<b>14</b>	<b>20%</b>	<b>33%</b>	<b>47%</b>	<b>100%</b>
<b>Total</b>			<b>447</b>	<b>292</b>	<b>202</b>	<b>45%</b>	<b>21</b>	<b>103</b>	<b>78</b>	<b>10%</b>	<b>51%</b>	<b>39%</b>	<b>100%</b>

### Correlation between effectiveness criteria and strong CFI rating

An analysis of correlations between CFI status and factors in the 4 effectiveness criteria (Table 2) revealed that strong CFIs were characterized by a range of variables including: several related to the impacts/benefits of the CFI (7 out of 17 variables); regular patrolling (1 out of 7 variables) under CFI management; and 2 out of 11 CFI sustainability variables, i.e., the levels of participation anticipated by CFI members in community fisheries activities, and future level of the knowledge about the CFI by-laws anticipated among the CFI members.

Table 2: Results of correlation analysis between the strength of CFI status and variables in the 4 effectiveness criteria in the 2022 CFI Effectiveness Assessment

Correlation coefficient	Variables with strong relationship with the strength of CFI status
<b>Management</b>	<b>1 out of 7 Management variables 2022</b>
0.615**	Patrolling regularly
<b>CFiC</b>	<b>0 out of 7 Committee variables 2022</b>
	No variables with strong correlation
<b>Benefits/impacts</b>	<b>7 out of 17 Benefits/Impact variables 2022</b>
0.699**	Compared to a few years ago, how proud CFI members are now to be a part of the community

0.631**	Compared to a few years ago, how are the socioeconomic benefits of CFI members in comparison to non-CFI members now?
0.692**	Compared to a few years ago, how is the fish catch now?
0.685**	Compared to a few years ago, how is the income now?
0.656**	Compared to a few years ago, how is the CFI fishing ground now providing fish and other aquatic resources for income of the CFI members?
0.674**	Compared to a few years ago, how is the CFI fishing ground now providing fish and other aquatic resources for food security (household consumption) of the CFI members?
0.600**	Compared to a few years ago, how is the fish stock in your CFI fishing areas now?
<b>Sustainability</b>	<b>2 out of 11 Sustainability variables 2022</b>
0.616**	Based on the current level of the participation of CFI members in the community fisheries activities, what level do you think will be in the future?
0.631**	Based on the current level of the knowledge about the CFI by-laws among the CFI members, what level do you think will be in the future?

### Comparative analysis of CFI pairwise status 2018 VS 2022

Given that 163 CFIs (81%) in the data set of the 2022 CFI effectiveness assessment were also included in the 2018 data set, a paired comparison analysis was also performed to assess changes in the statuses of these 163 CFIs over the 4 years between these two assessments. The results (see summary in Table 3) show that the proportion of CFIs in the moderate status category was similar; 52% in 2018 and 55% in 2022. Comparable to the overall assessment results based on the total 202 registered CFIs, there was a significant reduction in weak CFIs from 39% in 2018 to 9% in 2022. This was paralleled by an increase in the percentage of strong CFIs from 10% in 2018 to 37% in 2022. Among the CFIs assessed as being weak in 2018, 13% remained weak in 2022, while 63% were assessed as moderate and 24% had become strong. Of the CFIs assessed as moderate in 2018, 7% were now assessed as weak while 43% had become strong. In the CFI group assessed as strong in 2018, 44% were assessed as moderate in 2022.

Table 3: Results on changes in CFI statuses from paired analysis of 163 registered CFIs in both the 2018 and 2022 assessments

Status 2022	Status 2018			
	Weak n (%)	Moderate n (%)	Strong n (%)	Total (%)
Weak	8 (13%)	6 (7%)	0 (0%)	14 (9%)
Average	40 (63%)	42 (50%)	7 (44%)	89 (55%)
Strong	15 (24%)	36 (43%)	9 (56%)	60 (37%)
<b>Total n (%)</b>	<b>63 (39%)</b>	<b>84 (52%)</b>	<b>16 (10%)</b>	<b>163 (100%)</b>

The four main criteria for assessing CFI effectiveness in 2018 and 2022 were comparable. Similar “average” ratings were given for each of the 163 CFIs in each of the four main criteria: 1. community fisheries management and operations; 2. CFC’s processes for community engagement; 3. benefits/impacts of CFI; and

4. CFi sustainability. The 2022 results show slightly higher ratings, especially for the criterion focused on the CFC's processes for engaging communities.

Figure 16: Comparing mean scores of the four effectiveness criteria in 2018 and 2022

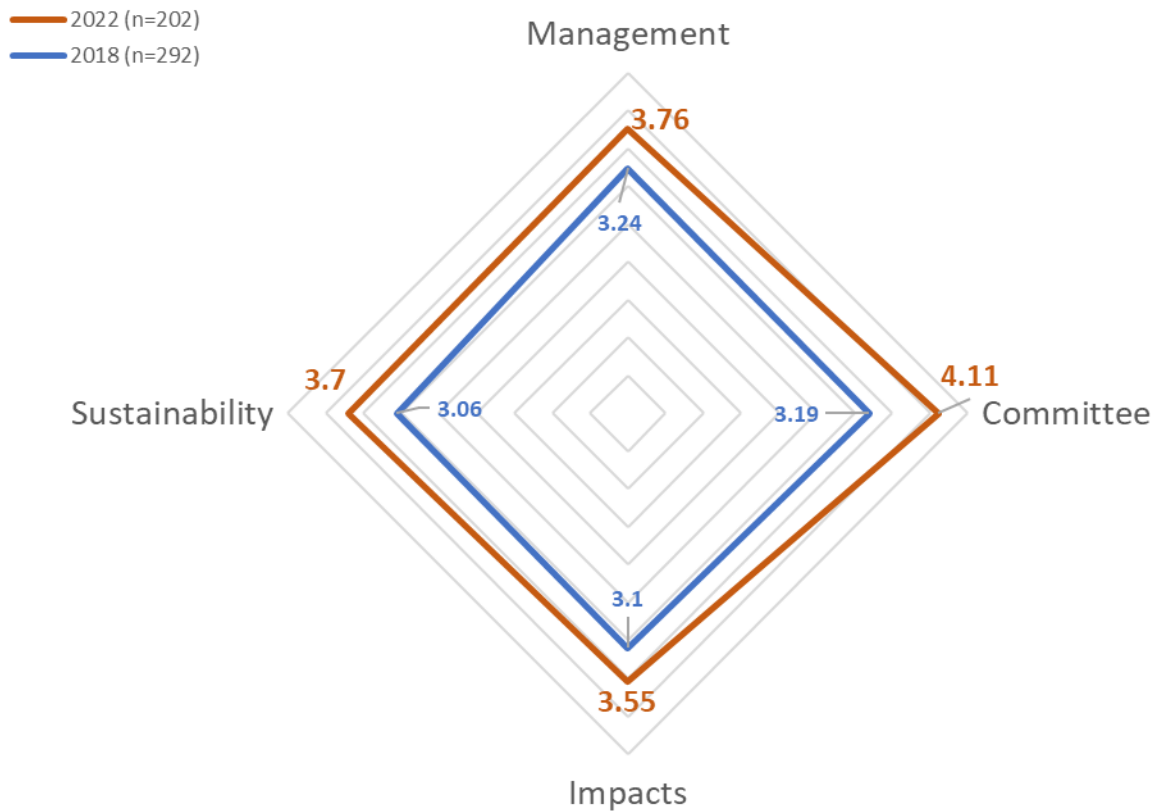


Table 4: Summary result of pair - CFi assessment moving up and down from 2018 and 2022

Status (n)	Weak 2018	Average 2018	Strong 2018	Total (n)	Status 2022
Weak 2022	8	6		14	9%
Average 2022	40	42	7	89	55%
Strong 2022	15	36	9	60	37%
<b>Total</b>	<b>63</b>	<b>84</b>	<b>16</b>	<b>163</b>	100%
<b>Overall 2018</b>	<b>39%</b>	<b>52%</b>	<b>10%</b>	<b>100%</b>	
Weak 2022	13%	7%	0%	9%	
Average 2022	63%	50%	44%	55%	
Strong 2022	24%	43%	56%	37%	
<b>Total</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	

Table 5 presents a comparison among those 163 Pair-CFis conducted in both 2018 and the follow up in 2022. Of these CFis, more than 3 times more CFis are presently rank as strong in comparison to 2018. Similarly, the percentage of CFis with weak status declined from 39% in 2018 to 9% in 2022.

Table 5: Summary result of pair - CFI assessment 2018 and 2022

S.N	Regional	English	Panel-Pair 2018-22 (n)	% Weak		% Average		% Strong	
				2018	2022	2018	2022	2018	2022
1	Chaktomuk	Prey Veng	13	62%	0%	38%	69%	0%	31%
2	Chaktomuk	Takeo	6	0%	0%	83%	33%	17%	67%
<b>sub-total Chaktomuk</b>			<b>19</b>	<b>42%</b>	<b>0%</b>	<b>53%</b>	<b>58%</b>	<b>5%</b>	<b>42%</b>
3	Mekong	Kampong Cham	6	17%	33%	67%	67%	17%	0%
4	Mekong	Tboung Khmum	4	25%	0%	75%	25%	0%	75%
5	Mekong	Ratanak Kiri	1	0%	0%	100%	0%	0%	100%
<b>sub-toal Mekong</b>			<b>11</b>	<b>18%</b>	<b>18%</b>	<b>73%</b>	<b>45%</b>	<b>9%</b>	<b>36%</b>
6	Southern	Kampong Chhnang	36	22%	3%	69%	56%	8%	42%
7	Southern	Pursat	15	20%	7%	53%	47%	27%	47%
8	Southern	Battambang	30	70%	7%	30%	70%	0%	23%
<b>sub-toal Southern</b>			<b>81</b>	<b>40%</b>	<b>5%</b>	<b>52%</b>	<b>59%</b>	<b>9%</b>	<b>36%</b>
9	Northern	Kampong Thom	15	80%	27%	7%	60%	13%	13%
10	Northern	Siemreap	8	38%	0%	63%	25%	0%	75%
11	Northern	Banteay Meanchey	6	83%	0%	17%	83%	0%	17%
<b>sub-toal Northern</b>			<b>29</b>	<b>69%</b>	<b>14%</b>	<b>24%</b>	<b>55%</b>	<b>7%</b>	<b>31%</b>
12	Marine	Kep	5	0%	0%	60%	20%	40%	80%
13	Marine	Kampot	3	0%	0%	33%	33%	67%	67%
14	Marine	Preah Sihanouk	9	11%	11%	78%	56%	11%	33%
15	Marine	Koh Kong	6	0%	50%	100%	33%	0%	17%
<b>sub-toal Marine</b>			<b>23</b>	<b>4%</b>	<b>17%</b>	<b>74%</b>	<b>39%</b>	<b>22%</b>	<b>43%</b>
<b>Total</b>			<b>163</b>	<b>39%</b>	<b>9%</b>	<b>52%</b>	<b>55%</b>	<b>10%</b>	<b>37%</b>

#### 4. Conclusion and recommendations

Comparing the results of the CFI effectiveness assessments in 2018 and 2022, it can be concluded that the effectiveness of registered CFis improved significantly over time. Data from the two CFI status assessments indicate that the number of weak CFis are reducing, whilst the number of strong CFI are increasing. The proportion of CFis assessed as 'moderate' appears to be unchanged, representing about half of all registered CFis, while the proportion of strong CFis increased and that of weak CFis decreased. The proportions of strong and weak CFis have in fact reversed, with the number of weak CFis decreasing over the four years between assessments from 39% to 10%, while the number of strong CFis comparably increased from 9% to 39%. Therefore, the target of 34% strong CFis was met.

The CFI effectiveness assessment is a critical tool to track the situation and effectiveness of all CFis in Cambodia. It is also a means to provide important input for developing plans and policies for supporting the CFI development process. The methodology developed in 2018 was sound and successfully implemented. This methodology continued to be used in 2022 with an improved data

collecting tool that integrated up-to-date and additional variables for CFI effectiveness. In future assessments, the tool should be adjusted to make sure that important variables for the time period are taken into consideration. The questions should remain to be easy to understand and answer by the community members. Participants attending the FGD session should be CFI members (instead of the village chief, CFI chief and CFI committee members) to avoid biased information. The only exception applies to those questions that only the CFI committee themselves can respond accurately.

These 2018 and 2022 assessments demonstrate that CFI effectiveness can rise from weak or moderate to strong. At the same time, the findings show that CFIs that were strong in the past can drop into the moderate category over time. This finding is very important and indicates the importance of continuing activities and capacity building support to all CFIs, regardless of the category they are in, to ensure that they can become or remain strong, and can be sustainable into the future.

All CFIs (registered and non-registered) should be assessed to assess the strengths and weaknesses of each CFI. The pair-wise analysis with the CFIs included in both 2018 and 2022 assessments should be continued when possible as these will help track the differences of the individual CFIs. Additionally, a study should be conducted to identify the factors and root causes of CFIs being inactive or weak, and to subsequently address these factors in the most effective ways possible.

Since staff members of the FiACs have the capacity to do follow-up assessments with the simple, pre-designed FGD questions and data template, they should be able to carry out a new assessment within next three years, and to provide the results from each of the Cantonments to the FiA-CFDD for compiling and conducting overall analysis and synthesis. It is important the CFDD has support from other relevant FiA departments in their data analysis as this has been an area of low capacity.

Among the 4 criteria of effectiveness, a correlation analysis between the CFI effectiveness status and the factors that support strong CFIs shows the benefits and impacts of the CFI are most important, followed by regular patrolling and the level of participation by CFI members in community fisheries activities and their levels of knowledge regarding the CFI legal frameworks. Therefore, to encourage the community fisheries to work towards sustainability and efficiency, the two most important tasks should focus on the implementation of the main activities affecting CFI impacts and sustainability.

In combination with other assessments and studies, it is clear that sustainable financing mechanisms should be developed and strengthened to make sure that all CFIs can become more self-reliant, stronger, and sustainable. Collecting cash contributions should be undertaken from people who are not CFI's members but who conduct fishing activities in the CFI area—a practice that has not been common in most CFIs in the country. Identifying possibilities for CFIs to secure sources of income to directly support CFI development will be an important incentive for both the CFI committee members and their families as well as other community members to join in the CFI activities, and increase their readiness to take on the responsibilities, tasks, and ownership of the CFI. At the same time, it is necessary to amend the sub-decree on Community Fisheries Management to make it possible for a CFI to do community-based and small fishing inside of its CFI area and to have more rights for developing the CFI. The promotion of supplementary and alternative sources of income, such as



saving groups, eco-tourism, and credit services are very important for the livelihoods of poor local fishers and local people.

Lastly, the knowledge of which CFIs are strong in each of the province and region could allow hosting events to effectively support knowledge exchange, having strong CFIs provide lessons learnt and good practices to those that are moderate or weak. Simultaneously, the knowledge of weak and moderate CFIs should be used to initiate and strengthen the capacity of CFI committee members to address areas of needs.

### Focus Group Discussion for CFI's Effectiveness Assessment

(Please tick [✓] only one answer per question, unless specified)

a. ID: .....	b. Date: .....	c. Name(s) of facilitator(s) Interviewer: ..... Note taker: .....
-----------------	-------------------	---

<b>I. Description of CFI</b>	
1.1 What is the name of the CFI?: .....	
1.2 Where is it located? .....	1.2.1 Village(s): .....
1.2.2 Commune(s): .....	1.2.3 District(s): .....
1.2.4 Province: .....	

<b>II. Management/Operation of CFI</b>			
<b>To what extent has CFI been with the following management and operation aspects?</b>			
2.1 Creating a conservation area	1. No <input type="checkbox"/>	3. In preparation <input type="checkbox"/>	5. Yes <input type="checkbox"/>
2.2 Making conservation area useful for conserving fisheries	1. No <input type="checkbox"/>	3. Some <input type="checkbox"/>	5. A lot <input type="checkbox"/>
2.3 Resolving fisheries conflicts in the CF fishing area	1. No <input type="checkbox"/>	3. Sometimes <input type="checkbox"/>	5. Always <input type="checkbox"/>
2.4 Reducing illegal fishing	1. No <input type="checkbox"/>	3. Some <input type="checkbox"/>	5. A lot <input type="checkbox"/>
2.5 Patrolling regularly	1. No <input type="checkbox"/>	3. Sometimes <input type="checkbox"/>	5. Often <input type="checkbox"/>
2.6 Enforcing rules and internal regulations against illegal fishing	1. No <input type="checkbox"/>	3. Some <input type="checkbox"/>	5. A lot <input type="checkbox"/>
2.7 Disseminating information on fisheries laws, sub-decrees, rules and regulations to community members	1. No <input type="checkbox"/>	3. Sometimes <input type="checkbox"/>	5. Always <input type="checkbox"/>

<b>III. Community Fishery Committee (CFC) process of engaging communities</b>			
<b>To what extent has the CFC been in the following processes?</b>			
3.1 CFC meets and consults with members	1. No <input type="checkbox"/>	3. Some <input type="checkbox"/>	5. Fully <input type="checkbox"/>

3.2 CFC implements community development projects	1. No <input type="checkbox"/>	3. Some <input type="checkbox"/>	5. Fully <input type="checkbox"/>
3.3 CFC holds re-elections together with the community and support from fisheries officials	1. No <input type="checkbox"/>	3. Yes with some delay <input type="checkbox"/>	5. Yes and on time <input type="checkbox"/>
3.4 CFC opens elections and re-elections to everyone	1. No <input type="checkbox"/>	3. Some <input type="checkbox"/>	5. Fully <input type="checkbox"/>
3.5 CFC makes sure decisions are open and transparent	1. No <input type="checkbox"/>	3. Some <input type="checkbox"/>	5. Fully <input type="checkbox"/>
3.6 CFC represents all CF members, including women, in fisheries management decision making	1. No <input type="checkbox"/>	3. Some <input type="checkbox"/>	5. Fully <input type="checkbox"/>
3.7 CFC allocates fair fishing access rights to CFI members	1. No <input type="checkbox"/>	3. Some <input type="checkbox"/>	5. Fully <input type="checkbox"/>

#### IV. Impacts of CFI

##### Social

4.1.a Compared to a few years ago, how is the access to the fisheries resources of CFI members now?	1. No better access <input type="checkbox"/>	3. Some better access <input type="checkbox"/>	5. Much better access <input type="checkbox"/>
4.1.b Compared to a few years ago, how is the access to the fisheries resources of CFI members now in comparison to non-CFI members?	1. No better access <input type="checkbox"/>	3. Some better access <input type="checkbox"/>	5. Much better access <input type="checkbox"/>
4.1.c Compared to a few years ago, are the benefits now shared by all people in the community fisheries?	1. No <input type="checkbox"/>	3. Some people <input type="checkbox"/>	5. All people <input type="checkbox"/>
4.1.d Compared to a few years ago, are women now included in CFI, fisheries management decision and implementation of CFI?	1. Less <input type="checkbox"/>	3. Same <input type="checkbox"/>	5. More <input type="checkbox"/>
4.1.e Compared to a few years ago, how proud CFI members are now to be a part of the community	1. Less <input type="checkbox"/>	3. Same <input type="checkbox"/>	5. More <input type="checkbox"/>
4.1.f Other social benefit, please specify _____	1. Less <input type="checkbox"/>	3. Same <input type="checkbox"/>	5. More <input type="checkbox"/>

##### Economic

4.2.a How are the socioeconomic benefits from being a CFI member now?	1. No benefit <input type="checkbox"/>	3. Some benefits <input type="checkbox"/>	5. Lots of benefits <input type="checkbox"/>
4.2.b Compared to a few years ago, how are the socioeconomic benefits of CFI members in comparison to non-CFI members now?	1. Less <input type="checkbox"/>	3. Same <input type="checkbox"/>	5 More <input type="checkbox"/>
4.2.c Compared to a few years ago, how is the fish catch now?	1. Less <input type="checkbox"/>	3. Same <input type="checkbox"/>	5 More <input type="checkbox"/>
4.2.d Compared to a few years ago, how is the income now?	1. Less <input type="checkbox"/>	3. Same <input type="checkbox"/>	5 More <input type="checkbox"/>

4.2.e Compared to a few years ago, how are the markets for fish now?	1. Less <input type="checkbox"/>	3. Same <input type="checkbox"/>	5 More <input type="checkbox"/>	
4.2.f Compared to a few years ago, how are the alternative livelihood sources (cash and non cash) now?	1. Less <input type="checkbox"/>	3. Same <input type="checkbox"/>	5 More <input type="checkbox"/>	
If more, what are the alternative livelihoods? Please specify.				
4.2.g Compared to a few years ago, how is the CFi fishing ground now providing fish and other aquatic resources <sup>2</sup> for income of the CFi members?	1. Little <input type="checkbox"/>	3. Moderately <input type="checkbox"/>	5. Enough for most members <input type="checkbox"/>	
4.2.h Compared to a few years ago, how is the CFi fishing ground now providing fish and other aquatic resources for food security (household consumption) of the CFi members?	1. Little <input type="checkbox"/>	3. Moderately <input type="checkbox"/>	5. Enough for most members <input type="checkbox"/>	
4.2.i Other (specify):	1. Less <input type="checkbox"/>	3. Same <input type="checkbox"/>	5 More <input type="checkbox"/>	
<b>Environment</b>				
4.3.a Compared to a few years ago, how is the fish stock in your CFi fishing areas now?	1. Worse <input type="checkbox"/>	3. Same <input type="checkbox"/>	5. Better <input type="checkbox"/>	
4.3.b Compared to a few years ago, how is the condition of the fish brood stock in your CFi conservation areas?	1. Worse <input type="checkbox"/>	3. Same <input type="checkbox"/>	5. Better <input type="checkbox"/>	
Compared to a few years ago, how has CFi now helped improve/restore the following habitats for fish and aquatic life in the CFi area?				
4.3.c Inundated/flooded forest	0. Not relevant	1. Worse <input type="checkbox"/>	3. Same <input type="checkbox"/>	5. Better <input type="checkbox"/>
4.3.d Coral reef	0. Not relevant	1. Worse <input type="checkbox"/>	3. Same <input type="checkbox"/>	5. Better <input type="checkbox"/>
4.3.e Mangrove	0. Not relevant	1. Worse <input type="checkbox"/>	3. Same <input type="checkbox"/>	5. Better <input type="checkbox"/>
4.3.f Seagrass	0. Not relevant	1. Worse <input type="checkbox"/>	3. Same <input type="checkbox"/>	5. Better <input type="checkbox"/>
4.3.g Compared to a few years ago, how is now the level of understanding of the importance of sustaining natural resources among community members?	1. Worse <input type="checkbox"/>	3. Same <input type="checkbox"/>	5. Better <input type="checkbox"/>	

<b>V. Community Fisheries Sustainability</b>			
<b>Social</b>			
5.1.a Based on the current level of fishers who are members of the CFi (compared to the total number of fishers in the community), what level do you think will be in the future?	1. Less <input type="checkbox"/>	2. Same <input type="checkbox"/>	3. More <input type="checkbox"/>

<sup>2</sup> Other aquatic resources include animals and plants that come from the CFi fishing grounds.

5.1.b Based on the current level of the participation of CFi members in the community fisheries activities, what level do you think will be in the future?	1. Less <input type="checkbox"/>	2. Same <input type="checkbox"/>	3. More <input type="checkbox"/>
5.1.c Based on the current level of the knowledge about the CFi by-laws among the CFi members, what level do you think will be in the future?	1. Less <input type="checkbox"/>	2. Same <input type="checkbox"/>	3. More <input type="checkbox"/>
5.2.d Based on the current CFi Committee's ability/capacity to lead CFi, what level do you think will be in the future?	1. Weaker <input type="checkbox"/>	2. Same <input type="checkbox"/>	3. Stronger <input type="checkbox"/>
<b>Economic</b>			
5.2.a Based on the current fisheries-related income of <b>CFI community members</b> , what do you think it will be in the future?	1. Less <input type="checkbox"/>	3. Same <input type="checkbox"/>	5. More <input type="checkbox"/>

<b>ASK ONLY CFC</b> 5.2.b Based on the current CFC budget to support CFi activities, what do you think it will be in the future?	1. Less <input type="checkbox"/>	3. Same <input type="checkbox"/>	5. More <input type="checkbox"/>
---	----------------------------------	----------------------------------	----------------------------------

<b>ASK ONLY CFC</b> 5.2.c What are the current financing sources of CFi? Check [✓] all that apply)	a. No funding <input type="checkbox"/>	b. Government <input type="checkbox"/>	c. NGO <input type="checkbox"/>
	d. Donor <input type="checkbox"/>	e. CFi members (membership fee) <input type="checkbox"/>	f. Companies <input type="checkbox"/>
	g. Church/pagoda <input type="checkbox"/>	h. Contributions from non-CFi fishers <input type="checkbox"/>	i. Income from fishing operations <input type="checkbox"/>
	j. Income from eco-tourism <input type="checkbox"/>	k. Internal micro-credits (e.g. from saving groups) <input type="checkbox"/>	l. Others, specify _____ <input type="checkbox"/>

<b>Governance</b>			
5.3.a Based on the current fisheries management, what do you think it will be in the future?	1. Will not improve (continue to be poorly managed) <input type="checkbox"/>	3. Will be managed better <input type="checkbox"/>	5. Will be managed sustainably <input type="checkbox"/>
5.3.b Based on the current fisheries harvest control (who, where and how fisheries are harvested), what do you think it will be in the future?	1. Will still have no control <input type="checkbox"/>	3. Will have more control <input type="checkbox"/>	5. Will have sustainable control over <input type="checkbox"/>
5.3.c Based on the current compliance to fisheries rules, what do you think it will be in the future?	1. Still nobody will comply <input type="checkbox"/>	3. More people will comply <input type="checkbox"/>	5. Everyone will comply <input type="checkbox"/>

<b>ASK ONLY CFC</b> 5.3.d Based on the current means and budget for patrolling, what do you think they will be in the future?	1. Less <input type="checkbox"/>	2. Same <input type="checkbox"/>	3. More <input type="checkbox"/>
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<b>Environment</b>			
5.4.a Based on the current condition of the fisheries resources, what do you think they will be in the future?	1. Unsustainable/Worse <input type="checkbox"/>	2. Same <input type="checkbox"/>	3. Sustainable/Better <input type="checkbox"/>
5.4.a Based on the current condition of the fisheries habitats, what do you think they will be in the future?	1. Unsustainable/Worse <input type="checkbox"/>	2. Same <input type="checkbox"/>	3. Sustainable/Better <input type="checkbox"/>

6. What do you think are the 3 most important things that would make CFi stronger and more sustainable?

**PLEASE BE SURE TO TAKE NOTES AND ENTER THE INFORMATION ACCURATELY.**

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_

Thank you very much for your participation.



**Annex 2: Data template for incorporating and analysing the CFI's effectiveness**

I.	II.			III.			IV.		-	-	-	V.	-		-	-	Mean	Mean	Mean	Mean	Total mean
1.1	2.1	2.2	2.6	3.1	3.2	3.6	4.1	4.2	4.3	4.7	4.8	5.1	5.2	5.3	5.9	5.11	មធ្យម	មធ្យម	មធ្យម	មធ្យម	ចំណើយម
								a.	-	-	-		-	a.	-	-	II	III	IV	V	II,III,IV,V
									-	-	-		-		-						
									-	-	-		-		-						
									-	-	-		-		-						
									-	-	-		-		-						



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