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MINISTRY OF AGRICULTURE, FORESTRY AND FISHERIES
FISHERIES ADMINISTRATION

Mekong Integrated Water Resources Management Project Phase III - Component 1

## TECHNICAL REPORTS

## Baseline survey of fishing households in Kratie and Stung Treng Provinces



# BASELINE SURVEY OF FISHING HOUSEHOLDS IN KRATIE AND STUNG TRENG PROVINCES 

Prepared by the
Inland Fisheries Research and Development Institute
for the
Fisheries Administration

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## Document prepared by:

Robert Pomeroy, Eric Baran, Ngor Pengby, Pha Sroy, Touch Kim Chhan, Sokhan Savuth, Ly Vuthy, Tuy Samram, Chhuon La, So Rothavy, Tim Sandan, Bun Racy, Touch Bunthang, Chheng Phen and Eng Chea San
with assistance from:
Sim Thavary, Ou Sary, Thieng Seyha, Phou Sok, Tith Puthearath, Pos Channara, Ken Laiheang and Pheach Ousa.
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## Contact:

Fisheries Administration
Inland Fisheries Research and Development Institute
\#186, Preah Norodom Blvd., Phnom Penh, Cambodia
Web: ifredi-cambodia.org
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A relatively small percentage of village household members (19\%) and CFi household members (21\%) consider themselves to be full-time fishers. A similarly small percentage of village household members (15\%) and CFI household members (16\%) consider themselves to be part-time fishers. All households and CFi households report that the main sources of household income comes from a mix of fishing and agriculture practices (crops, orchards, livestock), although CFi households report slightly more income from fishing than agriculture practices. Among CFi households, 29\% report fishing as their primary source of household income with the highest amount coming during the season of May to July, the dry season. Only 3\% of all households and CFi households report doing aquaculture. Fiftynine percent (59\%) of all households and $39 \%$ of CFi households process fish.

Both all households and CFi households report that $72 \%$ of their protein comes from fish. However, more than $80 \%$ of the households report that there is not enough fish to meet their family needs during all seasons of the year. More than $60 \%$ of households report that there is not enough meat to meet their family needs during all seasons of the year. More than $90 \%$ of all households and CFi households eat fish 3-7 times per week.

On average, the CFi households report that there are three CFi meetings per year. Seventy-nine percent of CFi households report satisfactory participation in the CFi. The Community Fisheries Committee (CFC) coordinates their activities with the commune council or Fisheries Cantonment. Forty-one percent of CFi households report that the CFi seeks funding for the CFi and 62\% report that they are successful in obtaining funding from such sources as NGOs and individuals. Fifty-six percent report that the CFC manages the CFi finances well. Eighty-one percent feel that the CFC makes decisions in a transparent manner. Eighty-two percent of CFi households report that the CFi benefits them both socially and economically by increasing fish catch, providing alternative livelihoods and opening up more markets for their fish catch.

Seventy-two percent of CFi households report that there is conflict in the fishery. This is a result of illegal fishing (electrofishing, gillnets, bed nets), competition for resources, outside the community fishers fishing in the CFi, and patrols confronting illegal fishers. Thirty-one percent feel that the CFi helps to reduce conflict. Thirty-two percent report that the CFi has a mechanism to resolve conflict. Eighty-eight percent of households report that illegal fishing is a problem. Ninety-one percent (91\%) feel that government is taking action to reduce illegal fishing and $89 \%$ report that the CFC is taking action to reduce illegal fishing. Thirty-seven percent report that illegal fishing has decreased, $31 \%$ that it has increased, and $23 \%$ that it has stayed the same. Eighty-two percent report that enforcement has been taken to address illegal fishing. Seventy-four percent report that some people do obey the fishing rules.

Ninety-one percent of CFi households report that fish catch has declined in the last five years. More than $50 \%$ report that the condition of the fishery is bad. This is a result of illegal fishing, increased fishing pressure and fishing in the breeding season. Seventy-eight percent (78\%) feel that conservation areas are good. Sixty-four percent report that the CFi has improved the fish stock. Eighty-nine percent report that the CFi has improved fisheries management. Seventy-six percent feel that the CFi has improved fish habitats. Among CFi households, $48 \%$ expect that the fishery will maintain its current level of productivity over the next five years. The main threats to the fishery include electrofishing, illegal fishing gears and practices, and population growth. The suggested approaches to improve fisheries management include prevent illegal fishing, more conservation areas, and more patrolling and enforcement.

Eighty-four percent of CFi households report that the CFi has by-laws and internal regulations; 77\% report having identified boundaries and map of the community fishing area; 74\% report having a community fishing area agreement; 54\% report that the CFi is registered and recognized by MAFF; $66 \%$ report that there is a community fishing area management plan; $71 \%$ report that there are rules and regulations against illegal fishing; and 69\% report having a conservation area.

The CFi households reported that participation of women needs to more supported and encouraged, there needs to more education and training on gender, and more meetings and workshops to encourage participation. The CFi households reported that participation of indigenous people needs to be supported and encouraged through more education and training on indigenous people for more understanding and more meetings and workshops to encourage participation.

The following recommendations should be considered during project implementation:

1. A priority should be to provide support to continue to diversify livelihoods of all households as fishing is a livelihood and income source for a small percentage of the households and all households rely on a mix of livelihood and income sources, such as agriculture.
2. Improved fisheries management is critical to be able to maintain food security for households as a majority of households report not having enough fish to meet their needs.
3. The CFis are considered to be working well and provide benefits to members. The CFis capacity to manage the fisheries and to serve its members needs to be strengthened on administration (i.e. funding, CFC roles and responsibilities) and fisheries management.
4. Conflict is an important issue and capacity building on conflict management and dispute resolution is needed by the CFi members and the CFC.
5. Illegal fishing is considered to be the most important fisheries issue. Increased capacity building and resources need to be put into enforcement and compliance activities.
6. It is recommended to enhance the participation of women and indigenous people in all CFi activities and as members of the CFC.

## 1. INTRODUCTION

The objective of the Mekong Integrated Water Resources Management Phase III project (M-IWRM III) is to enhance Cambodia's institutional capacity and infrastructure to sustainably manage its water and fishery resources in the northeast of Cambodia, and thus more effectively engage in trans-boundary water management. The project is implemented in the Mekong River Basin at the Northeast of Cambodia and the implementation duration of the project is 5 years (2016-2020). The Project consists of two components:

1) Component 1: Support for Fisheries and Aquatic Resources Management in Northern Cambodia managed by IFReDI/FiA as Implementing Agency.
2) Component 2: Support for River Basin Management in the 3 S sub-basin and 4P sub-basin and Coordination with riparian Countries in Northern Cambodia managed by CNMC as Implementing Agency.

Component 1 has the following general objectives:

- establishment of community-based fisheries management organizations including development of fisheries management plans and demonstration of supplementary livelihood activities;
- strengthening public sector fishery management including monitoring, enforcement of regulations, and supporting indigenous species aquaculture and stocking.
- Providing support for local government capacity building and rural infrastructure.

Among natural resources in the Mekong River, capture fisheries are of particular importance for the communities along the Mekong and its tributaries. With the river's large flood pulse, abundant wetlands and estuaries, fisheries in the Mekong have been productive, and have always been the main livelihood for the local population. Based on Mekong River Commission (MRC) estimates, capture fisheries in the Mekong are valued at US\$2-3 billion. Reportedly, more than two-thirds of about 800 fish species migrate between the Mekong Delta in Vietnam and northern Lao PDR, and all species are significantly affected by flow regimes and water quality. In this context, fisheries management is considered to be a part of the larger water resources management in the Mekong Basin.

This component, managed by IFReDI/FiA, aims to establish sound fisheries management in the mainstream Mekong between Kratie and Stung Treng in Northern Cambodia where a significant number of critical habitats are located.

The key stakeholders involved with this component are: The Fisheries Administration (FiA), The Ministry of Water Resources and Meteorology (MOWRAM), provincial FiA, fishing communities, technical institutions, community groups, and civil society organizations.

In order to assess the overall performance of the project, a Monitoring and Evaluation (M\&E) system was put in place. This M\&E includes a component on the impact of the project activities on socioeconomics, governance and ecological performance of Community Fisheries (CFi). This implies a comparison of the situation in each CFi at time $t_{0}$ in particular at the beginning of the project and at time $t_{n}$ in particular at the end of the project.

The present document is focused on project performance, i.e. on the specific questions the M\&E must answer in order to assess intervention benefits and progress towards fully functional CFi. As previously mentioned, the two main objectives of these questions are:
i) to assess the situation in each CFi , based on questionnaires in the households of the villages featuring a CFi;
ii) to compare for each CFi the situation at the beginning and at the end of the project.
the overall question being:
iii) what has been the impact of the project in the 70 target CFi?

The Methods section below describes the methodology for data analysis, then individual questions and answers are detailed.

## 2. METHOD

The baseline survey was undertaken between September 2017 and October 2018. The following steps were undertaken during the baseline survey:

1. Preparatory activities - August to September 2017
2. Development of questionnaire, coding and database creation- September 2017
3. Training of interviewers (19 provincial fisheries officers from the two provinces) and questionnaire pre-test- September 2017
4. Field data collection - October to December 2017
5. Data encoding - January to April 2018
6. Development of book of M\&E questions for analysis - May 2018
7. Data analysis - June to September 2018
8. Report preparation - September to October 2018

During the preparatory activities the objective of the study was defined, the study area and community fisheries were identified, the indicators were defined, and the survey team was identified.

The monitoring required the development of a baseline survey initiated before the project started its assistance activities at the CFi level. The questionnaire of that baseline survey is also the questionnaire for the monitoring of CFI (see the companion report "Questionnaire for the monitoring of Community Fisheries"). Each questionnaire is designed at the household level, with a representative number of households surveyed in each CFI; then results about the CFI can be inferred from the sample of CFI households. A copy of the questionnaire is presented in Appendix 1.

To take advantage of the substantial sampling effort, the questionnaire was designed with a larger scope than just ex-ante / ex-post assessment. It includes in particular a number of questions that go beyond the mere project M\&E, to also inform the Gender and Safeguards components of the project and potentially allow students and researchers to undertake larger assessments and research studies (e.g. explanatory analyses about the different trajectories of CFI depending on village wealth, composition, or gender proportions).


Figure 1: Relevance of the baseline survey to several analyses

During the baseline, the households surveyed were members of the CFI or not (769 households were members of a CFI, 431 were not). This implies distinguishing, as was done below, which questions should be analyzed for CFI members only (typically in relation to fishing or CFI functioning) and which questions can be analyzed for all village households (typically in relation to environment or resource availability). By default, the data analyst averaged the answers from different households belonging to a given group.

It is also important to distinguish questions at time $t$ in the survey questionnaire (e.g. "How many women are there in your CFI") from questions required for the M\&E as a before/after comparison (e.g. "Has the proportion of women in CFI progressed between the beginning and the end of the project?"). In this example, preparing answers to the $M \& E$ questions implied:

- moving from answers to questions at the household level (in questionnaires) to answers to questions at the CFI level;
- converting numbers (in household questionnaires) into proportions (in CFI).

Ten classes of indicators were used in this study to analyze the impacts of the project: fishing, aquaculture and processing activities; income; food and nutrition; CFI governance; gender and indigenous people; satisfaction about CFI management; and perceived social and environmental benefits from management.

In total, the monitoring and evaluation was done using 59 indicators:

- Fishing activities: 6 indicators
- Aquaculture activities: 5 indicators
- Processing activities: 2 indicators
- Income: 7 indicators (including indicator about fishing, aquaculture and processing)
- Food and nutrition: 8 indicators
- CFI governance: 13 indicators
- Gender and indigenous people: 5 indicators
- Satisfaction about CFI management: 4 indicators
- Social and environmental benefits from management: 9 indicators

This is supplemented with questions about extension services as part of the FiA's contribution to comanagement.

The total sample size was 1200 households. The sample size was determined as the maximum number doable given project budget, staff availability, time availability and logistical constraints.

The survey was conducted in two provinces (Kratie and Stung Treng). The details of the sample location is presented in Table 1. This included 540 households in Stung Treng province and 660 households in Kratie province. This also included 769 community fisheries households and 431 noncommunity fisheries households. All villages with community fisheries in the two provinces were included in the survey. A random sampling methodology was used in each village.

After cleaning the data, it was determined that 29 questionnaires were not useable. The total sample size used for the analysis was 1181 households. This included 762 community fishing households and 419 non-community fishing households.

Table 1: Villages and CFi surveyed

| Province | District | Commune | Community Fisheries | Village |
| :--- | :--- | :---: | :---: | :---: |
| Stung Treng |  |  |  |  |
|  | Seam Bok | 6 | 16 | 16 |
|  | Thalaboreivat | 6 | 25 | 27 |
|  | Say san | 4 | 5 | 11 |
|  | Seam Bang | 2 | 1 | 3 |
|  | Steong Traeng | 1 | 4 | 3 |
| Sub-total | 5 | 19 | 51 | 60 |
| Kratie |  |  |  | 6 |
|  | Kratie | 3 | 3 | 27 |
|  | Sombo | 7 | 27 | 12 |
|  | Chet Borey | 6 | 11 | 6 |
|  | Chhloung | 5 | 5 | 14 |
|  | Snuol | 4 | 5 | 15 |
|  | Preak Brosob | 7 | 15 |  |
| Sub-total | 6 | 32 | 66 | 117 |
| Total | 11 | 51 |  |  |



Figure 2: Location of the $\mathbf{8 2}$ villages surveyed in Kratie province


Figure 3: Location of the $\mathbf{6 0}$ villages surveyed in Stung Treng province

Based on the questionnaire, a book of questions to be addressed in the data analysis was prepared; the questions are those reflected in the present report.

The overall objectives for the data analysis are:

- to generate a set of routine in MS Excel, so that answers to household survey questions can be aggregated into answers to M\&E questions about CFI;
- to generate a set of CFI profiles (one per CFI receiving project assistance) answering all M\&E questions.
With these results, it will be possible to compare, during the last year of the project and for each CFI, the answers to $M \& E$ questions at the beginning of the project and at the end of the project (questions in blue).

The data analysis of CFI was done in two parts:
i) questions about individual CFI, leading to a portfolio of answers by CFI and, later on, an assessment of the progress within each CFI (e.g. satisfaction rate among CFI households);
ii) questions about all CFI collectively, in order to assess overall progress in the CFI of the two provinces (e.g. progress in development of a Management Plan among Community Fisheries)
The data analysis utilized descriptive statistics for each question.

The baseline survey faced a number of limitations/challenges. Time differences in schedules for the fishers and interviewers slowed the completion of the sample respondent interviews. The Khmer language was not spoken in some villages so a translator was needed. Access to some target villages was difficult due to their remote location.

Importantly, the results presented here are overviews and summaries about ALL villages and ALL Community Fisheries; of course individual data are available for EACH Community Fishery, and will provide the basis of individual sheets about the situation in EACH community at the beginning and at the end of the project.

### 3.1. Main patterns among individual CFI answers

This section presents results on fishing, aquaculture, income, nutrition, CFi governance, gender and minorities, benefits of management, satisfaction with CFi management and extension services. The numbers refer to the numbering of questions in the questionnaire. The questions are those from both the questionnaire (first) and the book of questions (second) used to direct the data analysis.

### 3.1.1. Fishing activities and trends in yield

M\&E perspective: Comparison of the percentage of village households involved in full-time fishing activities
Questionnaire question 9.2: How many members of your household are engaged in fishing FULL TIME?
Data analysis question: Among all village households, what is the percentage of household members involved in full time fishing?
Baseline: Among all village households, only 19\% of the household members are involved in full time fishing. This is 1215 persons out of a reported total of 6235 household members in all village households.

M\&E perspective: Comparison of the percentage of CFI households involved in full-time fishing activities
Questionnaire question 9.2: How many members of your household are engaged in fishing FULL TIME?
Data analysis question: Among the CFI households, what is the percentage of household members involved in full time fishing?
Baseline: Among only CFi households, only $21 \%$ of the household members are involved in full time fishing. This is 864 persons out of a reported total of 4119 household members in all CFi households.

M\&E perspective: Comparison of the percentage of village households involved in part-time fishing activities Questionnaire question 9.3: How many members of your household are engaged in fishing PART TIME? Data analysis question: Among all village households, what is the percentage of household members involved in part-time fishing?
Baseline: Among all village households, only $15 \%$ of the household members are involved in part-time fishing. This is 963 persons out of a reported total of 6235 household members in all village households.

M\&E perspective: Comparison of the percentage of CFI households involved in part-time fishing activities
Questionnaire question 9.3: How many members of your household are engaged in fishing PART TIME?
Data analysis question: Among the CFI households, what is the percentage of household members involved in part-time fishing?
Baseline: Among only CFi households, only 16\% of the household members are involved in part-time fishing. This is 639 persons out of a reported total of 4119 household members in all CFi households.

Occupation


Figure 4: Role of fishing as an occupation

## M\&E perspective: No comparison here, just for information

Questionnaire questions 9.17, 9.24, 9.30: What is the most important of your fishing gear? Data analysis question: Among all CFI, what are the three dominant fishing gears?
Baseline: Among all CFi households, the three dominant fishing gears ranked from most utilized are gillnet, hook longline/single line and cast net.

## M\&E perspective: Comparison of the catch per week per season per dominant large-scale gear

Questionnaire questions $9.18,9.25$ \& 9.31: During what seasons do you use this gear?
Data analysis question: For the first most important gear in the CFI and for each season during which the gear is used, identify how many kilos are caught per week (average of all CFI households)
Baseline: Among all CFi households using gillnets, the most dominant gear used by CFi households, the average catch per week for each of four fishing seasons is reported in Table 2.

Table 2. Average catch per week using gillnet by fishing season for CFi households

| Gear | Average catch <br> per week <br> February-April | Average catch <br> per week May- <br> July | Average catch per <br> week August- <br> October | Average catch per week <br> November-January |
| :--- | :---: | :---: | :---: | :---: |
| Gill net | 20.44 kg | 27.18 kg | 16.98 kg | 19.46 kg |

## M\&E perspective: Comparison of the catch per week per season per dominant large-scale gear

Questionnaire questions 9.24, 9.25 \& 9.26: During what seasons do you use this gear?
Data analysis question: For the second most important gear in the CFI and for each season during which the gear is used, identify how many kilos are caught per week (average of all CFI households)
Baseline: Among all CFi households using hook longline/single line, the second most dominant gear used by CFi households, the average catch per week for each of four fishing seasons is reported in Table 3.

Table 3. Average catch per week using hook longline/single line by fishing season for CFi households

| Gear | Average catch <br> per week <br> February-April | Average catch <br> per week May- <br> July | Average catch per <br> week August- <br> October | Average catch per week <br> November-January |
| :---: | :---: | :---: | :---: | :---: |
| Hook <br> longline $/$ single <br> line | 13.05 kg | 15.54 kg | 13.56 kg | 14.75 kg |

M\&E perspective: Comparison of the catch per week per season per dominant large-scale gear
Questionnaire questions $9.30,9.31$ \& 9.32: During what seasons do you use this gear?
Data analysis question: For the third most important gear in the CFI and for each season during which the gear is used, identify how many kilos are caught per week (average of all CFI households)
Baseline: Among all CFi households using cast net, the third most dominant gear used by CFi households, the average catch per week for each of four fishing seasons is reported in Table 4.

Table 4. Average catch per week using cast net by fishing season for CFi households

| Gear | Average catch <br> per week <br> February-April | Average catch <br> per week May- <br> July | Average catch per <br> week August- <br> October | Average catch per week <br> November-January |
| :---: | :---: | :---: | :---: | :---: |
| Cast net | 12.80 kg | 18.10 kg | 7.50 kg | 9.50 kg |



### 3.1.2. Aquaculture activities

M\&E perspective: Evolution in the percentage of households that practice aquaculture
Questionnaire question 11.1: Do you practice aquaculture? All households
Data analysis question: Among all village households, what percentage of the households practice aquaculture?
Baseline: Among all village households, only 3\% of the households practice aquaculture. That is 36 households out of a total of 1181 households.

M\&E perspective: Evolution in the percentage of households that practice aquaculture
Questionnaire question 11.1: Do you practice aquaculture? CFi households
Data analysis question: Among CFI households, what percentage of the CFI households practice aquaculture?
Baseline: Among CFi member households, only 3\% of the households practice aquaculture. That is 25 households out of a total of 762 households.

M\&E perspective: Evolution in the percentage of households that do aquaculture with fingerlings coming from the wild
Questionnaire question 11.4: What is the percentage of your fingerlings coming from the wild?
Data analysis question: Among CFI households, $\qquad$ \% of the households who do aquaculture use fingerlings coming from the wild.
Baseline: Among CFi member households, only one household of the 25 households who practice aquaculture reported using fingerlings coming from the wild.

M\&E perspective: Evolution in the percentage of households that do aquaculture with fingerlings coming from a hatchery

Questionnaire question 11.5: What is the percentage of your fingerlings coming from a hatchery? Data analysis question: Among CFI households doing aquaculture, $\qquad$ \% of households use fingerlings coming from a hatchery.
Baseline: Among CFi member households, only one household of the 25 households who practice aquaculture reported using fingerlings coming from a hatchery.

M\&E perspective: Evolution in the percentage of households that do aquaculture and feed their farmed fish with fish from the wild
Questionnaire question 11.6: Do you feed your aquaculture fish with fish from the wild?
Data analysis question: Among CFI households doing aquaculture, $\qquad$ \% of the households feed their farmed fish with fish from the wild
Baseline: Among CFi member households, $88 \%$ of households or 22 of the 25 households who practice aquaculture reported feeding this farmed fish with fish from the wild.

## M\&E perspective: Evolution of the quantity of fish produced per season among households doing aquaculture

Questionnaire questions 11.1 \& 11.8: For each of the past seasons, how many kilos of aquaculture fish did your produce?
Data analysis question: Among CFI households doing aquaculture and for each season, identify how many kilos of aquaculture fish are produced per season (average of all households doing aquaculture)
Baseline: Among all CFi households practicing aquaculture, the average production per each of four seasons is reported in Table 5.

Table 5. Average production from aquaculture per season

| Average production <br> for season February- <br> April | Average production <br> for season May-July | Average production <br> for season August- <br> October | Average production for <br> season November- <br> January |
| :---: | :---: | :---: | :---: |
| 196 kg | 14.92 kg | 52.48 kg | 24.72 kg |

### 3.1.3. Processing activities

M\&E perspective: Comparison of percentage of households that process fish
Questionnaire question 10.1: Do you process fish?
Data analysis question: What is the percentage of all village households that process fish?
Baseline: Of all the village households, $59 \%$ or 700 households of a total of 1181 households, process fish.

## M\&E perspective: Comparison of percentage of households that process fish

Questionnaire question 10.1: Do you process fish?
Data analysis question: What is the percentage of CFI households that process fish?
Baseline: Of all CFi member households, $39 \%$ or 459 households of a total of 762 households, process fish.

M\&E perspective: Comparison of the fish biomass processed per week per season per household
Questionnaire questions 10.1 \& 10.4: How many kg do you process per week?
Data analysis question: In the CFI, among households doing processing, for each season during which processing is done, identify how many kilos are processed per week (average of all households doing processing activities)
Baseline: For CFi households that do fish processing, the average amount of fish processed per week for each of four seasons is reported in Table 6.

Table 6. Average amount of fish processed per week for each of four seasons by CFi member households

| Average amount <br> processed February-April | Average <br> amount <br> processed <br> May-July | Average <br> amount <br> processed <br> August- <br> October | Average amount <br> processed November- <br> January |
| :---: | :---: | :---: | :---: |
| 3.39 kg | 9.25 kg | 1.57 kg | 2.00 kg |

3.1.4. Income

M\&E perspective: Comparison of income by activity to assess the evolution of livelihoods
Questionnaire question 4.1: What is the percentage of household income that comes from each activity in a year? Data analysis question: Among all households of the village, what is the percentage of household income that comes from each activity in a year?
Baseline: For all village households, farming of crops (28\%) and fishing (26\%) provide the largest percentage of household income in a year. Table 7 provides a breakdown of all sources of household income for village households.

Table 7. Self-estimate of sources of household income among all villages households

| Category | \% |
| :--- | :---: |
| Crops | 28 |
| Fishing | 26 |
| Orchard | 13 |
| Livestock | 11 |
| Labour | 8 |
| Selling in general | 6 |
| Farming in general | 3 |
| Government Official <br> (Teacher, police, etc.) | 1 |
| Timber products aquatic | $<1$ |
| Aquaculture | $<1$ |
| Gathering of <br> products$\quad$ to fishing |  |
| Related <br> (processing, <br> boat/gear building, etc.) | $<1$ |
| Animal rearing | $<1$ |
| Remittance | $<1$ |



Figure 5: Self-estimate of sources of household income among all villages households

M\&E perspective: Comparison of the pie charts of percentage of income by activity to assess the evolution of livelihoods
Questionnaire question 4.1: What is the percentage of household income that comes from each activity in a year? Data analysis question: Among household members of a CFI, what is the percentage of household income that comes from each activity in a year?
Baseline: For all CFi households, farming of crops (26\%) and fishing (28\%) provide the largest percentage of household income in a year. Table 8 provides a breakdown of all sources of household income for CFi households.

Table 8. S Self-estimate of sources of household income among all CFI households

| Source of Income | $\%$ |
| :---: | :---: |
| Fishing | 28 |
| Crops | 26 |
| Livestock | 13 |
| Orchard | 13 |
| Labour | 7 |
| Selling in general | 5 |
| Farming in general | 3 |
| Government Official <br> (Teacher, police, etc.) | 1 |
| Timber products | 1 |
| Aquaculture | $<1$ |
| Gathering of aquatic <br> products | $<1$ |
| Related to fishing <br> (processing, trading, <br> boat/gear building, etc.) | $<1$ |
| Animal rearing | $<1$ |
| Remittance |  |



Figure 6: Self-estimate of sources of household income among all CFi households

M\&E perspective: Comparison of the estimated role played by fish in households' income
Questionnaire question 9.11 (checking of answers to 4.1): What percentage of your household INCOME do you think comes from fish and fishing?
Data analysis question: In the CFI, households think that $\qquad$ \% of their income comes from fish and fishing
Baseline: For all CFi households, the respondents stated that approximately $29 \%$ of their annual income comes from fishing and farming.

M\&E perspective: Details about the above comparison: evolution of the estimated role played by fishing in households' income per season
Questionnaire question 9.13: Average monthly income from fishing by season?
Data analysis question: In the CFI,
a. Average monthly income from fishing in wet season:
b. Average monthly income from fishing in dry season:
c. Average monthly income from fishing during rising water season:
d. Average monthly income from fishing during receding water season:

Baseline: Table 9 presents the reported average monthly income of CFi households (in US dollars) from fishing for each of four seasons during the year.

Table 9. Average monthly income of CFi households from fishing by season

| Season | Income |
| :--- | :--- |
| February-April | $\$ 88.05$ |
| May-July | $\$ 114.40$ |
| August-October | $\$ 57.54$ |
| November-January | $\$ 80.47$ |

M\&E perspective: Evolution of the estimated role played by fish trade in households' income per season
Questionnaire question 9.14: Average monthly income from fish trading (retail, wholesale) by season?
Data analysis question: In the CFI,
a. Average monthly income from fish trading in wet season:
b. Average monthly income from fish trading in dry season:
c. Average monthly income from fish trading during rising water season:
d. Average monthly income from fish trading during receding water season:

Baseline: Table 10 presents the reported average monthly income of CFi households (in US dollars) from fish trading for each of four seasons during the year.

Table 10. Average monthly income of CFi households from fish trading by season

| Season | Income |
| :--- | :---: |
| February-April | $\$ 14.26$ |
| May-July | $\$ 15.08$ |
| August-October | $\$ 8.67$ |
| November-January | $\$ 9.76$ |

M\&E perspective: Evolution of the estimated role played by fish processing in households' income per season
Questionnaire question 9.15: Average monthly income from fish processing by season?
Data analysis question: In the CFI, average monthly income from fish processing
a. in wet season
b. in dry season:
c. during rising water season:
d. Average monthly income from fish processing during receding water season:

Baseline: Table 11 presents the reported average monthly income of CFi households (in US dollars) from fish processing for each of four seasons during the year.

Table 11. Average monthly income of CFi households from fish processing by season

| Season | Income |
| :--- | :---: |
| February-April | $\$ 6.50$ |
| May-July | $\$ 14.48$ |
| August-October | $\$ 1.48$ |
| November-January | $\$ 2.23$ |

M\&E perspective: Comparison of the income from fish processing per week per season
Questionnaire questions 10.3 \& 10.7 (checking of answers to 9.15): What is the total sale value of fish processed and sold per week? (USD) by season?
Data analysis question: For each season during which processing is done, identify the total income in USD from processing per week (average of all households)
Baseline: Table 12 presents the reported average weekly income of all village households (in US dollars) from fish processing for each of four seasons during the year.

Table 12. Average weekly income of all village households from fish processing by season

| Season | Income |
| :--- | :---: |
| February-April | $\$ 12.00$ |
| May-July | $\$ 12.42$ |
| August-October | $\$ 7.90$ |
| November-January | $\$ 10.76$ |

M\&E perspective: Comparison of the income from aquaculture fish per season for people doing aquaculture
Questionnaire questions 11.1 \& 11.11: What is the total sale value of aquaculture fish production for this system per season? (USD) by season?
Data analysis question: In the CFI and for each season, among people doing aquaculture identify the total value of aquaculture fish production (in USD) per season (average of all households doing aquaculture)
Baseline: Table 13 presents the reported total value of aquaculture production for CFi households practicing aquaculture (in US dollars) for each of four seasons during the year.

Table 13. Total value of aquaculture production for CFi households

| Season | Income |
| :--- | :---: |
| February-April | $\$ 30.33$ |
| May-July | $\$ 6.00$ |
| August-October | $\$ 6.07$ |
| November-January | $\$ 2.23$ |

### 3.1.5. Food and nutrition

## M\&E perspective: Evolution of the estimated contribution of fish and fishing to protein supply

Questionnaire question 9.12: What percentage of the meat (protein) eaten in your household do you think comes from fish?

Data analysis question: In the village, households believe that $\qquad$ \% of the meat (protein) they eat come from fish and fishing
Baseline: For all village households, the respondents reported that $72 \%$ of the meat (protein) that they eat comes from fish and fishing.

## M\&E perspective: Evolution of the estimated contribution of fish and fishing to protein supply

Questionnaire question 9.12: What percentage of the meat (protein) eaten in your household do you think comes from fish?
Data analysis question: In the CFI, households believe that $\qquad$ $\%$ of the meat (protein) they eat come from fish and fishing
Baseline: For CFi households, the respondents reported that 72\% of the meat (protein) that they eat comes from fish and fishing.


Figure 7: Self estimated sources of protein in the diet for all households

## M\&E perspective: Comparison of the processed fish biomass consumed per household per week per season

Questionnaire questions 10.3 \& 10.5: How many kilos of processed fish do you eat per week (own use) by season? Data analysis question: Among CFI households, for each season during which processing is done, identify how many kilos of processed fish are consumed in-house per week (average of all households)
Baseline: For CFi households that do fish processing, Table 14 presents the amounts of kilograms of processed fish consumed by the household per week by season.

Table 14. Amount of processed fish consumed by CFi households weekly by season

| Season | $\mathbf{K g}$ |
| :--- | :---: |
| February-April | 5.83 |
| May-July | 6.21 |
| August-October | 3.34 |
| November-January | 4.61 |

M\&E perspective: Evolution of the aquaculture fish consumption among people doing aquaculture
Questionnaire questions 11.1 \& 11.9: How many kilos of the production are consumed by the household by season?
Data analysis question: Among CFI households, for each season, among people doing aquaculture identify how many kilos of aquaculture fish are consumed in-house per season (average of all households doing aquaculture)
Baseline: For CFi households that practice aquaculture, Table 15 presents the amounts of kilograms of fish consumed by the household by season.

Table 15. Amount of aquaculture fish consumed by CFi households weekly by season

| Season | Kg |
| :--- | :---: |
| February-April | 8.91 |
| May-July | 4.78 |
| August-October | 8.57 |
| November-January | 1.17 |

M\&E perspective: Evolution per season of the fear that there is not enough fish to meet the family needs
Questionnaire question 12.3: Is there a season during which there is not enough fish to meet the family needs? Data analysis question: Among all village households the percentage of households who fear that there is not enough fish to meet the family needs
a. in the dry season is $\qquad$ $\%$,
b. s in the flooding season is $\qquad$ \%,
c. in the Flood/rainy season is $\qquad$ \%,
d. in the flood recession season is $\qquad$ \%

Baseline: For all village households, Table 16 presents the percentage of households who fear that there is not enough fish to meet the family needs by season.

Table 16. Village households who fear there is not enough fish to meet family needs by season

| Season | Season Description | \% |
| :--- | :---: | :---: |
| February - April | Dry | $86 \%$ |
| May - July | Flooding | $92 \%$ |
| August - October | Flooding/rainy | $79 \%$ |
| November - January | Flood recession | $91 \%$ |



Figure 8: Average seasonal percentage of village households who fear there is not enough fish to meet the family needs

M\&E perspective: Evolution per season of the fear that there is not enough meat to meet the family needs
Questionnaire question 12.4: Is there a season during which there is not enough meat to meet the family needs? Data analysis question: Among all village households the percentage of households who fear that there is not enough meat to meet the family needs
a. in the dry season is $\qquad$ $\%$,
b. s in the flooding season is $\qquad$ \%,
c. in the Flood/rainy season is $\qquad$ $\%$,
d. in the flood recession season is $\qquad$ $\%$
Baseline: For all village households, Table 17 presents the percentage of households who fear that there is not enough meat to meet the family needs by season.

Table 17. Village households who fear there is not enough meat to meet family needs by season

| Season | Season Description | \% |
| :--- | :---: | :---: |
| February - April | Dry | $69 \%$ |
| May - July | Flooding | $68 \%$ |
| August - October | Flooding/rainy | $62 \%$ |
| November - January | Flood recession | $69 \%$ |

M\&E perspective: Evolution in the percentage of households who worry that in the past four weeks they would not have enough food or have to cut on portions / quality
Questionnaire question 12.5: In the past four weeks = 30 days, did you worry that your household would not have enough food or have to cut on portions / quality?
Data analysis question: Among all village households, the percentage of households who worry that in the past four weeks they would not have enough food or have to cut on portions / quality amounts to $\qquad$ \%
Baseline: For village households, Table 18 presents the percentage of households that worry that in the past four weeks they would not have enough food or have to cut portions/quality.

Table 18. Village households that worry about having enough food in the past four weeks

| Concern about availability <br> of enough food | Households that worry <br> about not having enough <br> food | $\%$ |
| :--- | :---: | :---: |
| Never | 483 | $41 \%$ |
| Sometimes | 477 | $40 \%$ |
| Often | 115 | $10 \%$ |
| Daily | 106 | $9 \%$ |
| Total | 1181 | $100 \%$ |

M\&E perspective: Evolution in the percentage of households who ate fish respectively 02, 3-5 or 6-7 times a week Questionnaire question 12.8: Number of days household has eaten fish over last 7 days?
Data analysis question: Among all village households,
$\qquad$ $\%$ of households ate fish 0 to 2 times a week $\qquad$ $\%$ of households ate fish 3 to 5 times a week
$\qquad$ $\%$ of households ate fish 6 to 7 times a week
Baseline: For village households, Table 19 presents the percentage of households that eat fish 0-2 times weekly, 3-5 times weekly and 6-7 times weekly.

Table 19. Percentage of village households that eat fish by times per week

| Times per week eat fish | Number of HH | \% |
| :--- | :---: | :---: |
| $0-2$ | 110 | $9 \%$ |
| $3-5$ | 539 | $46 \%$ |
| $6-7$ | 532 | $45 \%$ |



Figure 9: Frequency of fish consumption per week among all village households

Questionnaire question 12.9 : Number of days households have eaten aquatic animals over last 7 days? Data analysis question: Among all village households,
$\qquad$ \% of households ate aquatic animals 0 to 2 times a week $\qquad$ \% of households ate aquatic animals 3 to 5 times a week, $\qquad$ \% of households ate aquatic animals 6 to 7 times a week
M\&E perspective: Evolution in the percentage of households who ate aquatic animals respectively 02, 3-5 or 6-7 times a week
Baseline: For village households, Table 20 presents the percentage of households that eat aquatic animals 0-2 times weekly, 3-5 times weekly and 6-7 times weekly.

Table 20. Percentage of village households that eat aquatic animals by times per week

| Times per week eat <br> aquatic animals | Number of HH | \% |
| :--- | :---: | :---: |
| $0-2$ | 1091 | $92 \%$ |
| $3-5$ | 83 | $7 \%$ |
| $6-7$ | 7 | $1 \%$ |
| Grand Total | 1181 | $100 \%$ |

### 3.1.6. CFI governance

The following questions apply only to households member of a CFi. Again, individual data are available for each community and will be analysed at the end of the project for an ex-ante / ex-post comparison at the level of each CFi.

M\&E perspective: For each CFI, evolution in the average number of annual meetings between CFC and CFI
members
Questionnaire question 17.8: How often does the CFC meet with members?
Data analysis question: In all CFI, average number of annual meetings between CFC and CFI members as reported by households members of the CFI
Baseline: The average number of CFi meetings held annually as reported by the CFi household members was 3.

## M\&E perspective: For each CFI, evolution in the percentage of households reporting that the CFC does coordinate with commune council or the Fisheries cantonment?

Questionnaire question 17.10: Does the CFC coordinate with commune council or the Fisheries cantonment? Data analysis question: In all CFI, percentage of households reporting that the CFC does coordinate with commune council or the Fisheries Cantonment (Yes answer)
Baseline: Eighty-two percent ( $82 \%$ ) of the CFi households reported that the CFC does coordinate with the commune council or Provincial Fisheries Cantonment. Sixteen percent (16\%) did not know and 2\% responded that the CFC does not coordinate with the commune council or Provincial Fisheries Cantonment.

M\&E perspective: For each CFI, evolution in the percentage of households reporting that the CFC does develop networks with other CFI and organizations

Questionnaire question 17.11: Does the CFC Develop networks with other CFs and organizations?
Data analysis question: In all CFI, percentage of households reporting that the CFC does develop networks with other CFs and organizations (Yes answer)
Baseline: Fifty-five percent (55\%) of the CFi households reported that the CFC does develop networks with other CFis and organizations. Thirty-three percent (33\%) did not know and $12 \%$ responded that the CFC does not develop networks with other CFis and organizations.

### 3.1.6.1 CFI finances

M\&E perspective: Evolution in the percentage of CFI households reporting active fund raising by the CFC
Questionnaire question 16.1: Does the CFC seek funding?
Data analysis question: Percentage of households reporting active fund seeking by the CFC
Baseline: Forty-one percent (41\%) of the CFi households report that the CFC engages in active fund raising, $40 \%$ report not knowing, and $19 \%$ report that the CFC does not engage in active fund raising.

M\&E perspective: Evolution in the percentage of CFI households reporting that the CFC is somewhat successful at raising funds
Questionnaire question 16.2: Does the CFC get funding?
Data analysis question: Percentage of households reporting that the CFC does get funding
Baseline: Sixty-two percent (62\%) of CFi households report that the CFC is somewhat successful in raising funds, $22 \%$ report that they are not successful, and $15 \%$ do not know.

## M\&E perspective: For each CFI, evolution and diversification in the number of sources of funding

Questionnaire question 16.3: If yes, how is the CFi financed?
Data analysis question: Among the CFI households who report that the CFC does get funding, percentage of each source of funds: Government $\qquad$ \%, NGO $\qquad$ \%, Donor $\qquad$ \%, People $\qquad$ \%, Companies $\qquad$ \%, Church $\qquad$ \%, Other
$\qquad$ \%, Unknown $\qquad$ \%
Baseline: Among the CFi households that reported that the CFC is successful at fund raising, Table 21 presents the sources of the funding.

Table 21. Source of funding raised by the CFC

| Funding source | Number of CFi financed <br> from that source | \% |
| :--- | :---: | :---: |
| NGO | 113 | $58 \%$ |
| Individuals/people | 56 | $29 \%$ |
| Unknown | 17 | $9 \%$ |
| No funding | 4 | $2 \%$ |
| Government | 3 | $2 \%$ |
| Donor | 2 | $1 \%$ |

M\&E perspective: Evolution in the percentage of CFI households thinking that the finances record of the CFI are available for all members to examine
Questionnaire question 16.5: Are the finances record (income and expenditures) of the CF available for all members to examine?
Data analysis question: In the CFI, percentage of households thinking that the finances records of the CFI (income and expenditures) are available for all members to examine
Baseline: For CFi households, $30 \%$ of the households think that the financial records of the CFi are available for all member to examine, $12 \%$ report that they are not, and $58 \%$ do not know.


Figure 10: Awareness of members about finance records in the Community Fisheries

### 3.1.6.2 Illegal fishing and conflicts

M\&E perspective: Evolution in the proportion of CFI households thinking that there are no conflicts over fisheries, fishing area and other resources in the area
Questionnaire question 15.17: Are there conflict over fisheries, fishing area and other resources in the area?
Data analysis question: In the CFI, what is the percentage of households thinking that there are NO conflict over fisheries, fishing area and other resources in the area.
Baseline: Among CFi households, $28 \%$ report that there are no conflicts over fisheries, fishing area and other resources in the area.

## M\&E perspective: Not for comparison but for project information

Questionnaire question 15.18: What types of conflict?
Data analysis question: Among CFI households who say there are conflicts, what are the 3 main types of conflicts? Baseline: The top three types of conflicts as identified by CFi households are illegal fishing, outside community fishers fishing in the community fisheries and conflict between the community fisheries patrol and illegal fishers (Table 22)

Table 22. Types of conflicts as reported by CFi households

| Type of conflict | Number of households | \% |
| :--- | :---: | :---: |
| Illegal fishing | 94 | $44 \%$ |
| Outside community fishers | 36 | $17 \%$ |
| CFi/patrol with illegal fishers | 28 | $13 \%$ |
| Do not know | 24 | $11 \%$ |
| No conflict | 12 | $6 \%$ |
| Between legal and illegal fishers | 10 | $5 \%$ |
| Competition for resources | 9 | $4 \%$ |

M\&E perspective: In the CFI, evolution in the percentage of households thinking that illegal fishing is a problem Questionnaire question 15.22: Is illegal fishing a problem?
Data analysis question: In the CFI, percentage of households thinking that illegal fishing is a problem
Baseline: Among CFi households, $88 \%$ think that illegal fishing is a problem. Six percent (6\%) do not know if illegal fishing is a problem.

## M\&E perspective: Not for comparison but for project information

Questionnaire question 15.23: What type of illegal fishing occurs?
Data analysis question: Among the CFI households, what are the 3 dominant types of illegal fishing described?
Baseline: Among CFi households, the most dominant type of illegal fishing is electrofishing, reported by $68 \%$ of households. This was followed by gillnets ( $28 \%$ of households), bed nets ( $18 \%$ of households), fishing in the breeding season (6\% of households) and shooting in water (4\% of households).

M\&E perspective: In the CFI, evolution in the percentage of households thinking that the government is taking effective action to reduce illegal fishing
Questionnaire question 15.25: Is the government taking effective action to reduce illegal fishing?
Data analysis question: In the CFI, percentage of households thinking that the government is taking effective action to reduce illegal fishing
Baseline: Among the CFi households, $91 \%$ think that the government is taking effective action to reduce illegal fishing.

## M\&E perspective: In the CFI, evolution in the percentage of households thinking that the Community Fisheries Committee works to reduce illegal fishing

Questionnaire question 15.26: Does the Community Fisheries Committee work to reduce illegal fishing?
Data analysis question: In the CFI, percentage of households thinking that the Community Fisheries Committee work to reduce illegal fishing
Baseline: Among the CFi households, $89 \%$ think that the Community Fisheries Committee is working to reduce illegal fishing.

## M\&E perspective: Not for comparison but for project information

Questionnaire question 15.28: Have illegal fishing activities increased, remained the same or decreased in the past year?
Data analysis question: Among CFI households and compared to the previous year, percentage of households thinking that illegal fishing activities have:
increased $\qquad$ \% remained the same $\qquad$ \%
decreased $\qquad$ \%
Baseline: Among CFi households, $37 \%$ think that illegal fishing activities have decreased with the CFi, $31 \%$ think that it has increased, $23 \%$ think that illegal fishing activities have stayed the same, and $8 \%$ do not know.

### 3.1.6.3 Enforcement

M\&E perspective: In the CFI, evolution in the percentage of households reporting enforcement against illegal fishing (also checking of 15.27)
Questionnaire question 15.29: Is there any rule enforcement against illegal fishing?
Data analysis question: What is the percentage of CFi households reporting enforcement against illegal fishing?
Baseline: Among the CFi households, $82 \%$ report enforcement against illegal fishing and $18 \%$ report no enforcement against illegal fishing.

M\&E perspective: In the CFI, evolution in the percentage of households thinking that no one obeys the fisheries rules
Questionnaire question 15.34 (checking of 15.22 and 15.29 ): What was the compliance with fishery rules NOW? Data analysis question: In the CFI, percentage of households thinking that No one obeys the fisheries rules ___ Some people obey the rules___\% Everyone obeys fisheries rules $\qquad$ \%
Baseline: Among CFi households, Table 23 reports on the percentage of households that think that people obey the fishing rules and regulations.

Table 23. CFi households reporting on people obeying fishing rules and regulations

| Response | \% |
| :--- | :---: |
| No one obeys the fisheries rules | $4 \%$ |
| Some people obey the rules | $74 \%$ |
| Everyone obeys fisheries rules | $18 \%$ |
| Do not know | $3 \%$ |

### 3.1.7. Gender and indigenous people

M\&E perspective: For each CFI, evolution in the proportion of women in the CFI
Questionnaire question 14.4 and 14.5: Number of FEMALE CFi members?
Data analysis question: What is the proportion of women in the CFI?
Baseline: Approximately 49\% of CFi members are women.

M\&E perspective: For each CFI, evolution in the proportion of women in the CFC
Questionnaire question 17.3 and 17.5: Number of FEMALE Community Fisheries Committee Members? Data analysis question: What is the proportion of women in the CFC (i.e. CFI committee)?
Baseline: Approximately 25\% of Community Fishing Committee members are women.

M\&E perspective: Evolution in the percentage of households that have received training or awareness raising on gender
Questionnaire question 15.39: Have CFi members received any training or awareness raising on gender concept, gender issues in fishery and aquaculture sector?
Data analysis question: Percentage of households answering that CFI members have received training or awareness raising on gender concept, gender issues in fishery and aquaculture sector? (Yes answers only)
Baseline: Among CFi households, $59 \%$ report that they have received training or awareness raising on gender. Twenty-two percent (22\%) report having received no training or awareness raising on gender. Nineteen percent (19\%) reported not knowing if they have received any gender training or awareness raising.

M\&E perspective: Evolution in the percentage of households who think that women do participate actively in CFI activities
Questionnaire question 15.41: Do women participate actively in Community Fisheries activities?
Data analysis question: Percentage of CFI households who think that women participate actively in CFI activities Baseline: Among CFI households, $61 \%$ reported that they think that women actively participate in CFi activities. Thirty-three percent (33\%) reported that they think that women do not actively participate in CFi activities. Six percent (6\%) of household's report do not know.

M\&E perspective: In villages with indigenous people, evolution in the percentage of households thinking that indigenous people participate actively in Community Fisheries activities
Questionnaire question 15.43 (checking of 15.26): Do indigenous people (if any) participate actively in Community Fisheries activities?
Data analysis question: In villages with indigenous people, percentage of households thinking that indigenous people participate actively in Community Fisheries activities
Baseline: In communities with indigenous people, $48 \%$ of households do not think that indigenous people participate actively in community fisheries activities, $32 \%$ think that they do actively participate, and $20 \%$ do not know.

### 3.1.8. Satisfaction about CFI management

M\&E perspective: Evolution in the percentage of households who think their participation to the CFI operation is satisfactory
Questionnaire question 15.37: Is your participation to the CFi operation satisfactory?
Data analysis question: In the CFI, percentage of households who think their participation to the CFI operation is satisfactory (Yes answers only)
Baseline: Among CFi households, $79 \%$ think that their participation in the operation of the CFi is satisfactory. Fifteen percent (15\%) do not think that their participation in the operation of the CFi is satisfactory and 6\% do not know.

## M\&E perspective: Evolution in the percentage of households thinking that the CFC manages finances well

Questionnaire question 16.4: Does the CFC manage finances well?
Data analysis question: In each CFI, percentage of households thinking that the CFC manages finances well
Baseline: Among CFi households, $56 \%$ do not know if the CFC manages the CFi finances well. Thirtythree percent (33\%) think that the CFC manages the CFi finances well and $11 \%$ do not think the CFC manages the CFi finances well.

M\&E perspective: Evolution in the percentage of households estimating that elections and re-elections for the
CFC were open to everyone CFC were open to everyone
Questionnaire question 17.14: Were elections and re-elections for the CFC open to everyone?
Data analysis question: In each CFI, percentage of households estimating that elections and re-elections for the CFC were open to everyone
Baseline: Among CFi households, $75 \%$ think that the elections and re-elections for the CFC were open to everyone. Fifteen percent (15\%) do not know and 10\% do not think that the elections and reelections for the CFC were open to everyone.

M\&E perspective: Evolution in the percentage of households estimating that decisions by the CFC are made openly or transparently
Questionnaire question 17.16: Are decisions by the CFC made openly or transparently?
Data analysis question: In each CFI, percentage of households estimating that decisions by the CFC are made openly or transparently (Yes answer)
Baseline: Among CFi households, $81 \%$ think that the decisions made by the CFC are done openly and transparently. Sixteen percent (16\%) do not know and 6\% do not thing that the decisions made by the CFC are done openly and transparently.

### 3.1.9. Social and environmental benefits from management

M\&E perspective: Evolution in the percentage of households who declare that the fish catch respectively increased, remained the same, or decreased in quantity or value
Questionnaire question 9.8: During the last five year has your fish catch: Increased? Same? Decreased?
Data analysis question: In the CFI, the percentage of households declaring that during the last five years the fish catch has: increased in quantity amounts to ___ \% remained the same amounts to ___ \% decreased in quantity amounts to $\qquad$ \%
Baseline: Among CFi households, $91 \%$ think that the quantity of fish catch has decreased in the last five years. Seven percent (7\%) think that the quantity of fish catch has increased in the last five years. Two percent (2\%) think that the quantity of fish catch remained the same in the last five years. One percent (1\%) do not know.

M\&E perspective: Evolution in the percentage of households who declare that the fish catch respectively increased, remained the same, or decreased in quantity or value
Questionnaire question 9.8: During the last five year has your fish catch: Increased? Same? Decreased?
Data analysis question: In the CFI, households declare on average that during the last five years the fish catch has: increased in quantity by ___ \% decreased in quantity by ____ \%
Baseline: Among CFi households that think that the quantity of fish has increased in the last five years, they think that on average the quantity of fish catch has increased by 3\%. Among CFi households that think that the quantity of fish has decreased in the last five years, they think that on average the quantity of fish catch has decreased by $48 \%$.


Figure 11: Perspective of CFi households about changes in fish catch

## M\&E perspective: Not for comparison but for project information

Questionnaire question 9.9: What is the reason?
Data analysis question: What are the 3 dominant reasons given for the dominant answer?
Baseline: Among CFi households, the dominant reasons given for a decrease in fish catch in the last five years include electrofishing, illegal fishing gear such as gillnets, increased fishing pressure due to population increases, fishing in breeding season and in prohibited areas, use of explosives, pollution, irregular water cycle, dams and climate change. Among the CFi households, the dominant reasons for an increase in fish catch in the last five years include enforcement of fishing laws and regulations and water cycle is good.

M\&E perspective: For each CFI, evolution in the percentage of households thinking that the conservation area is useful for the conservation of the fishery
Questionnaire question 15.16: Is the conservation area useful for the conservation of the fishery?
Data analysis question: In the CFI, what is the percentage of households thinking that the conservation area is useful for the conservation of the fishery? (15.16)
Baseline: Among CFi households, $78 \%$ think that conservation areas are useful for the conservation of the fishery. Twelve percent (12\%) do not know and 10\% do not think that conservation areas are useful for the conservation of the fishery.

## M\&E perspective: For each CFI, evolution in the percentage of households considering that the CFI helps resolve conflict in fisheries <br> Questionnaire question 15.20: How does the CFi normally resolve conflicts? <br> Data analysis question: In the CFI, what is the percentage of households thinking that the CFI helps resolve conflict in fisheries?

Baseline: Among CFi households, 33\% think that the CFi helps to resolve fisheries conflicts. Thirty-four percent (34\%) do not feel that the CFi helps to resolve fisheries conflicts and $33 \%$ do not know.

M\&E perspective: Evolution in the percentage of households thinking that being a member of the CFI has helped them socially and economically
Questionnaire question 18.2: Do you think that being a member of the CFi has helped you to socially and economically benefit rather than being alone?
Data analysis question: In each CFI, percentage of households thinking that being a member of the CFI has helped them socially and economically
Among CFi households, $82 \%$ think that being a member of the CFi has helped them both socially and economically. Nine percent (9\%) do not know and 8\% do not think that being a member of the CFi has helped them both socially and economically.

## M\&E perspective: Not for comparison but for project information

Questionnaire question 18.3: If yes, please explain how?
Data analysis question: In each CFI, and among households who answered Yes to the previous question, percentage of households thinking that this has helped them by:
Catching more fish catch $\qquad$ \% Getting more income $\qquad$ \%
Having more markets for fish $\qquad$ \% Accessing alternative livelihood $\qquad$ \%
Baseline: Among CFi households and those households who answered yes to being a member of the CFi has helped them both socially and economically, $40 \%$ think that this has helped them by catching more fish, $32 \%$ by having access to alternative livelihoods, $28 \%$ by having more markets for their fish, and $21 \%$ by getting more income.

M\&E perspective: Evolution of the perspective about the condition of the fish stock
Questionnaire question 18.5: How would you describe the condition of the fish stock today?
Data analysis question: Among CFI households, percentage of households that would describe the condition of

$\qquad$
$\qquad$
$\qquad$
Baseline: Among CFi households, Table 24 presents the percentage of households that would describe the condition of the fish stocks now as very bad, bad, neither god nor bad, good and very good.

Table 24. CFI households reporting condition of fish stocks now

| Condition of fish stocks | \% |
| :--- | :---: |
| Very bad | $7 \%$ |
| Bad | $45 \%$ |
| Neither good or bad | $38 \%$ |
| Good | $8 \%$ |
| Very good | $1 \%$ |
| Do not know | $2 \%$ |



Figure 12: Perspective of CFi households about the current status of the fish stock

M\&E perspective: Evolution in the percentage of households who feel that the CFI has improved the fish stock in the area
Questionnaire question 18.6: Do you feel that the CFi has improved the fish stock in the area?
Data analysis question: In the CFI, percentage of households who feel that the CFI has improved the fish stock in the area?
Baseline: Among CFi households, $61 \%$ feel that the CFi has improved the fish stocks in the area. Twenty-eight percent (28\%) do not know and 11\% feel that the CFi has not improved the fish stocks in the area.

## M\&E perspective: Evolution in the percentage of each category

Questionnaire question 18.8: What would you say about the management of the fish resource NOW?
Data analysis question: In the CFI, percentage of households who feel that:
The fish resource is not managed $\qquad$ \% There are some management initiatives $\qquad$ \% There are good initiatives $\qquad$ \% There is good sustainable management $\qquad$ \%
Baseline: Among CFi households, Table 25 reports on the percent of households who feel that the fisheries are managed at different levels.

Table 25. CFi households who feel that fisheries are managed at different levels

| Fisheries management | \% |
| :--- | :---: |
| The fish resource is not managed | $8 \%$ |
| There are some management initiatives | $67 \%$ |
| There are good management initiatives | $22 \%$ |
| There is good sustainable management | $2 \%$ |
| Do not know | $2 \%$ |

M\&E perspective: Evolution in the percentage of households who feel that the CFI has improved the fish habitats Questionnaire question 18.9: Do you feel that the CFi has improved the habitats (wetlands, flooded forests) for fish in the area?
Data analysis question: In the CFI, percentage of households who feel that the CFI has improved the habitats (wetlands, flooded forests) for fish in the area?
Baseline: Among CFi households, 76\% feel that the CFi has improved the habitats (wetlands, flooded forest) for the fish in the area. Fifteen percent (15\%) do not know and 9\% feel that the CFi has not improved the habitats (wetlands, flooded forest) for the fish in the area.

## M\&E perspective: Evolution in the percentage of households who expect the fishery to maintain its current level of productivity

Questionnaire question 19.2: Do you expect the fishery to maintain its current level of productivity over the next 5 years?
Data analysis question: In the CFI, percentage of households who expect the fishery to maintain its current level of productivity over the next 5 years (Yes answer only)
Baseline: Among CFi households, $48 \%$ expect that the fishery will maintain its current level of productivity over the next five years. Forty-two percent (42\%) do not expect that the fishery will maintain its current level of productivity over the next five years and 9\% do not know.

### 3.1.10. Extension services

M\&E perspective: In the CFI, evolution in the percentage of households provided with information from extension agents
Questionnaire question 20.2: Do extension agents contact you or any women fishers to provide technical information or market information for your fishing and aquaculture?
Data analysis question: In the CFI, percentage of households provided with information from extension agent (Yes answers)
Baseline: Among CFi households, 70\% reported that they are provided with information from extension agents.

## M\&E perspective: In the CFI, evolution in the percentage of households who feel that the local administration is helpful for assistance and conflict management

Questionnaire question 20.3: In your opinion, do you feel that the local administration is helpful to you if you request any assistance, especially with respect to CFi conflicts?
Data analysis question: In the CFI, percentage of households who feel that the local administration is helpful for assistance and conflict management (Yes answers)
Baseline: Among CFi households, $88 \%$ feel that the local administration is helpful for assistance and conflict management.

### 3.2. General patterns among all Community Fisheries

### 3.2.1. CFI governance

## M\&E perspective: Among all CFI, evolution in the percentage of CFI having by-laws and internal regulations

Questionnaire question 15. 4: Are there CFi by-laws and internal regulations?
Data analysis question: Among all CFI, what is the percentage of CFI having by-laws and internal regulations?
Baseline: Among CFi households, $84 \%$ report that the CFi has by-laws and internal rules. Fourteen percent (14\%) do not know and 2\% report that the CFi does not have by-laws and internal rules.

M\&E perspective: Among all CFI, evolution in the percentage of CFI having completed mapping of the community fishing areas
Questionnaire question 15.6 (mistake in the questionnaire: should be 15.5): Have boundaries and mapping of the community fishing areas been completed?
Data analysis question: Among all CFI, what is the percentage of CFI having boundaries and maps of the community fishing areas completed?
Baseline: Among CFi households, 77\% report that the CFi has boundaries and completed maps of the community fishing area. Twenty percent (20\%) do not know and 3\% report that the CFi does not have boundaries and completed maps of the community fishing area.

M\&E perspective: Among all CFI, evolution in the percentage of CFI having a Community Fishery Area Agreement Questionnaire question 15.7: Is there a Community Fishery Area Agreement?
Data analysis question: Among all CFI, what is the percentage of CFI having a Community Fishery Area Agreement? (15.7)
Baseline: Among CFi households, 74\% report that the CFi has a Community Fishing Area Agreement. Twenty-three percent (23\%) do not know and 2\% report that the CFi does not have a Community Fishing Area Agreement.

M\&E perspective: Among all CFI, evolution in the percentage of CFI registered and recognized by FiA
Questionnaire question 15.8: Has there been registration and recognition of the community fisheries by FiA and MAFF?

Data analysis question: Among all CFI, what is the percentage of CFI registered and recognized by FiA and MAFF? Baseline: Among CFi households, $54 \%$ report that the CFi is registered and recognized by FiA and MAFF. Twenty-seven percent (27\%) do not know and $19 \%$ report that the CFi is not registered and recognized by FiA and MAFF.

M\&E perspective: Among all CFI, evolution in the proportion of CFI having a management plan
Questionnaire question 15.10: Is there a Community Fishery Area Management Plan?
Data analysis question: Among all CFI, what is the percentage of CFI having a Community Fishery Area Management Plan?
Baseline: Among CFi households, $65 \%$ report that the CFi has a community fishery area management plan. Twenty-eight percent (27\%) do not know and 8\% report that the CFi does not have a community fishery area management plan.

## M\&E perspective: Among all CFI, evolution in the proportion of CFI having rules and internal regulations for fisheries management

Questionnaire question 15.11: Are there rules and internal regulations for fisheries management in CFi?
Data analysis question: Among all CFI, what is the percentage of CFI having rules and internal regulations for fisheries management?
Baseline: Among CFi households, $83 \%$ report that the CFi has rules and internal regulations for fisheries management. Fifteen percent (15\%) do not know and 2\% report that the CFi does not have rules and internal regulations for fisheries management.

M\&E perspective: Among all CFI, evolution in the proportion of CFI having rules and regulations against illegal fishing
Questionnaire question 15.12: Are there rules and regulations against illegal fishing?
Data analysis question: Among all CFI, what is the percentage of CFI having rules and regulations against illegal fishing?
Baseline: Among CFi households, $71 \%$ report that the CFi has rules and regulations against illegal fishing. Twenty-one percent (21\%) do not know and $8 \%$ report that the CFi does not have rules and regulations against illegal fishing.

M\&E perspective: Among all CFI, evolution in the proportion of CFI having an activity plan for the next six months Questionnaire question 15.13: Does the CFi have an activity plan for the next six months?
Data analysis question: Among all CFI, what is the percentage of CFI having an activity plan for the next six months?

Baseline: Among CFi households, $37 \%$ report that the CFi has an activity plan for the next six months. Forty-seven percent (47\%) do not know and 16\% report that the CFi does not have an activity plan for the next six months.

M\&E perspective: Among all CFI, evolution in the proportion of CFI having a conservation area
Questionnaire question 15.14: Does your CFi have a conservation area?
Data analysis question: Among all CFI, what is the percentage of CFI having a conservation area?
Baseline: Among CFi households, 69\% report that the CFi has a conservation area. Twenty-three percent (23\%) report that the CFi does not a conservation area and 8\% do not know.

M\&E perspective: Among all CFI, evolution in the percentage CFI having a mechanism to resolve conflicts
Questionnaire question 15.19: Does the CFI has a mechanism to resolve conflicts?
Data analysis question: Among all CFI, what is the percentage of CFI having a mechanism to resolve conflicts?
Baseline: Among CFi households, $32 \%$ report that the CFi has a mechanism to resolve conflicts. Fortyfour percent (44\%) do not know and $24 \%$ report that the CFi does not have a mechanism to resolve conflicts.

### 3.2.2. Main threats and recommendations

Note: these questions and answers are not for comparison but for project information (relevant to the project for interventions)

Questionnaire question 9.16: In your opinion, what are the main threats to the fisheries?
Data analysis question: Among all CFI, what are the top three threats to fisheries?
Baseline: Among all CFi households, the top three threats to the fisheries are electrofishing, illegal fishing gears such as gillnets, and population growth/increase in fishing (Table 26).

Table 26. Threats to the fisheries

| Threats to the fisheries | \% |
| :--- | :---: |
| Electrofishing | $52 \%$ |
| Illegal fishing methods (Gillnet, etc.) | $42 \%$ |
| Population growth/Increase in fishing | $19 \%$ |
| Fish in breeding season, fish in prohibited area, etc. | $17 \%$ |
| Natural issue (climate change, etc.) | $9 \%$ |
| Dam | $7 \%$ |
| Explosives | $6 \%$ |
| Pollution | $5 \%$ |
| Weak law enforcement | $5 \%$ |
| Do not know | $4 \%$ |
| Modern fishing methods | $3 \%$ |
| Outsiders | $2 \%$ |
| Limited Knowledge | $<1 \%$ |

Questionnaire question 15.18: What types of conflict?
Data analysis question: Among all CFI, what are the three main types of conflict reported?
Baseline: Among all CFi households, 58\% do not know the main types of fisheries conflict reported (Table 27). Thirteen percent (13\%) report competition for resources, $11 \%$ illegal fishing and $8 \%$ no conflict.

Table 27. Types of fisheries conflicts

| Type of Conflict | \% |
| :--- | :---: |
| Do not know | $58 \%$ |
| Competition for resources | $13 \%$ |
| Illegal fishing | $11 \%$ |
| No conflict | $8 \%$ |
| Outside fisherman | $4 \%$ |
| Conflict legal and illegal fishermen | $2 \%$ |
| CF/Patroller with illegal fishermen | $4 \%$ |

Questionnaire question 19.4: In your opinion, how can the management of fisheries be improved (recommended action for fish stock sustainability and better social organization)?
Data analysis question: Among all CFI, what are the three main actions recommended to improve the management of fisheries?
Baseline: Among CFi households, $55 \%$ report that the main recommended action to improve fisheries management consists in preventing illegal fishing (Table 28). This is followed by conservation and patrolling and law enforcement.

Table 28. Main recommended actions to improve fisheries management

| Recommendations to improve <br> fisheries management | \% |
| :--- | :---: |
| Prevent illegal fishing | $55 \%$ |
| Conservation | $12 \%$ |
| Patrolling and law enforcement | $9 \%$ |
| Do not know | $8 \%$ |
| Cooperation with NGOs, etc. | $4 \%$ |
| Education | $3 \%$ |
| Report to CFi/experts, etc. | $3 \%$ |
| Provide money/things | $2 \%$ |

Questionnaire question 10.8: In your opinion, what are the main problems in processing?
Data analysis question: Among all CFI, what are the top-three main problems identified in processing?
Baseline: Among all CFi households, $62 \%$ do not know any problems in fish processing (Table 29). Sixteen percent (16\%) had not problem, $9 \%$ had limited ingredients and $5 \%$ had low quality meat.

Table 29. Problems with fish processing

| Problems in processing | \% |
| :--- | :---: |
| Do not know | $62 \%$ |
| No problem | $16 \%$ |
| Limited ingredients (Fish, salt, <br> etc) | $9 \%$ |
| Low quality meat | $5 \%$ |
| No Hygiene | $2 \%$ |
| Problem with technique (to little <br> salt, etc) | $2 \%$ |
| Follow traditional way | $1 \%$ |
| Not engough time/busy with <br> farming | $1 \%$ |
| No market | $<1 \%$ |
| Pricey | $<1 \%$ |

Questionnaire question 10.9: In your opinion, how can processing be improved?
Data analysis question: Among all CFI, what are the top-three recommended ways to improve processing?
Baseline: Among CFi households, $67 \%$ do not know ways to improve fish processing (Table 30). Fifteen percent (15\%) want to have technical training and $14 \%$ want standardization in processing methods.

Table 30. Recommendations to improve fish processing

| Recommendations to improve <br> processing | \% |
| :--- | :---: |
| Do not know | $67 \%$ |
| Want to have technical training | $15 \%$ |
| Standardization (Add more salt, <br> etc) | $14 \%$ |
| Hygiene | $2 \%$ |
| Find market | $1 \%$ |
| Use fresh fish | $1 \%$ |

Questionnaire question 11.12: In your opinion, what are the main problems in aquaculture?
Data analysis question: Among all CFI, for households doing aquaculture, what are the three main problems in aquaculture?
Baseline: For all households doing aquaculture, the three main problems that they face are health problems with fish, limited technology and access to money for the operation.

Questionnaire question 11.13: In your opinion, how can aquaculture be improved?
Data analysis question: Among all CFI, for households doing aquaculture, what are the top-three recommended actions to improve aquaculture?
Baseline: For all households doing aquaculture, the two main recommended actions to improve aquaculture are more technical training on aquaculture and access to health care for the fish.

Questionnaire question 15.42: What are your suggestion to improve active participations of women in the CFi? Data analysis question: Among all CFI, what are the top-three suggestions among households to improve the active participation of women in the CFI?
Baseline: Among all CFi households, $17 \%$ do not know how to improve the active participation of women in the CFi (Table 31). Fifteen percent (15\%) report encouragement and support, 15\% report education and training on gender and 12\% report meeting/participation/workshops in gender.

Table 31. How to improve the active participation of women in the CFi

| Answer | \% |
| :--- | :---: |
| Do not know | $17 \%$ |
| Encouragement/support | $15 \%$ |
| Education/training | $15 \%$ |
| Meeting/participation/workshop | $12 \%$ |
| Help women's tasks | $7 \%$ |
| Disseminate about the advantage of <br> fish/resource | $6 \%$ |
| Gender support | $5 \%$ |
| Donate/provide things or money | $1 \%$ |

Questionnaire question 15.44: What are your suggestion to improve the active participations of indigenous people (if any) in the CFi?
Data analysis question: In villages having ethnic communities, among all CFI, what are the top-three suggestions among households to improve the active participation of indigenous people (if any) in the CFI?

Baseline: Among all communities with indigenous people, the top three suggestions of households to improve the active participation of indigenous people are $8 \%$ more education/training on participation, $7 \%$ more support/encouragement to actively participate, and $7 \%$ having more meetings to allow for more participation (39\% of respondents do not know).

## 4. CONCLUSIONS AND RECOMMENDATIONS

A relatively small percentage of household members (19\%) and CFi household members (21\%) consider themselves to be full-time fishers. A relatively small percentage of household members (15\%) and CFI household members (16\%) consider themselves to be part-time fishers. All households and CFi households report that the main sources of household income comes from a mix of fishing and agriculture practices (crops, orchards, livestock), although CFi households report slightly more income from fishing than agriculture practices. Among CFi households, 29\% report fishing as their primary source of household income with the highest amount coming during the season of May to July, the dry season. Only 3\% of all households and CFi households report doing aquaculture. Fifty-nine percent (59\%) of all households and 39\% of CFi households process fish.

Both all households and CFi households report that 72\% of their protein comes from fish. However, more than $80 \%$ of the households report that there is not enough fish to meet their family needs during all seasons of the year. More than $60 \%$ of households report that there is not enough meat to meet their family needs during all seasons of the year. More than $90 \%$ of all households and CFi households eat fish 3-7 times per week.

On average, the CFi households report that there are three CFi meetings per year. Seventy-nine percent (79\%) of CFi households report satisfactory participation in the CFi. The Community Fisheries Committee (CFC) coordinates their activities with the commune council or Fisheries Cantonment. Forty-one percent (41\%) of CFi households report that the CFi seeks funding for the CFi and 62\% report that they are successful in obtaining funding from such sources as NGOs and individuals. Fifty-six percent (56\%) report that the CFC manages the CFi finances well. Eighty-one percent (81\%) feel that the CFC makes decisions in a transparent manner. Eighty-two percent (82\%) of CFi households report that the CFi benefits them both socially and economically by increasing fish catch, providing alternative livelihoods and opening up more markets for their fish catch.

Seventy-two percent (72\%) of CFi households report that there is conflict in the fishery. This is a result of illegal fishing (electrofishing, gillnets, bed nets), competition for resources, outside the community fishers fishing in the CFi, and patrols confronting illegal fishers. Thirty-one percent (31\%) feel that the CFi helps to reduce conflict. Thirty-two percent (32\%) report that the CFi has a mechanism to resolve conflict. Eighty-eight percent (88\%) of households report that illegal fishing is a problem. Ninety-one percent (91\%) feel that government is taking action to reduce illegal fishing and $89 \%$ report that the CFC is taking action to reduce illegal fishing. Thirty-seven percent (37\%) report that illegal fishing has decreased, $31 \%$ that it has increased, and $23 \%$ that it has stayed the same. Eighty-two percent (82\%) report that enforcement has been taken to address illegal fishing. Seventy-four percent (74\%) report that some people do obey the fishing rules.

Ninety-one percent (91\%) of CFi households report that fish catch has declined in the last five years. More than $50 \%$ report that the condition of the fishery is bad. This is a result of illegal fishing, increased fishing pressure and fishing in the breeding season. Seventy-eight percent (78\%) feel that conservation areas are good. Sixty-four percent (64\%) report that the CFi has improved the fish stock. Eighty-nine percent (89\%) report that the CFi has improved fisheries management. Seventy-six percent (76\%) feel
that the CFi has improved fish habitats. Among CFi households, $48 \%$ expect that the fishery will maintain its current level of productivity over the next five years. The main threats to the fishery include electrofishing, illegal fishing gears and practices, and population growth. The suggested approaches to improve fisheries management include prevent illegal fishing, more conservation areas, and more patrolling and enforcement.

Eighty-four percent (84\%) of CFi households report that the CFi has by-laws and internal regulations; $77 \%$ report having identified boundaries and map of the community fishing area; $74 \%$ report having a community fishing area agreement; $54 \%$ report that the CFi is registered and recognized by MAFF; $66 \%$ report that there is a community fishing area management plan; $71 \%$ report that there are rules and regulations against illegal fishing; and 69\% report having a conservation area.

The CFi households reported that participation of women needs to more supported and encouraged, there needs to more education and training on gender, and more meetings and workshops to encourage participation. The CFi households reported that participation of indigenous people needs to be supported and encouraged through more education and training on indigenous people for more understanding and more meetings and workshops to encourage participation.

The following recommendations should be considered during project implementation:
7. A priority should be to provide support to continue to diversify livelihoods of all households as fishing is a livelihood and income source for a small percentage of the households and all households rely on a mix of livelihood and income sources, such as agriculture.
8. Improved fisheries management is critical to be able to maintain food security for households as a majority of households report not having enough fish to meet their needs.
9. The CFis are working well and provide benefits to members. The CFis capacity to manage the fisheries and to serve its members needs to be strengthened on administration (i.e. funding, CFC roles and responsibilities) and fisheries management.
10. Conflict is an important issue and capacity building on conflict management and dispute resolution is needed by the CFi members and the CFC.
11. Illegal fishing is considered to be the most important fisheries issue. Increased capacity building and resources need to be put into enforcement and compliance activities.
12. Enhance the participation of women and indigenous people in all CFi activities and as members of the CFC.

# Mekong Integrated Water Resources Management Project (Phase III) <br> Component 1 <br> Community Fisheries Survey in Kratie and Stung Treng Provinces  <br>  <br>  

This Fisheries Administration is undertaking a five-year project to improve the management of fisheries resources in Stung Treng and Kratie Provinces. We want to understand the socioeconomic characteristics and livelihoods of village members in the project area, and their perceptions about the status and trends of their fisheries, and community fisheries management. The findings of this survey will provide a baseline to inform project activities, monitor project progress, and evaluate project impact.

To improve this understanding, we need your help to complete a questionnaire. All households selected for this survey were randomly selected, and all responses will remain confidential. You are able to withdraw at any point during interview. You are able to withdraw at any point during interview. If you choose to withdraw, your information will not be used. Your assistance is greatly appreciated.










Do you have any questions about the survey? Do we have your agreement to proceed?

Participant understands role and has given verbal consent (please check) $\square$


During the interview, convert all currency units into US dollars (USD $1=$ KHR 4000)


#  <br> Questionnaire for Household Survey <br>  

## 

| 1.1 | Date of Interview <br>  |  |
| :---: | :---: | :---: |
| 1.2 | Household Identification Number <br>  <br>  กูษิ |  |
| 1.3 | Village Name โญู่ากููษ |  |
| 1.4 | Commune Name โญู่: |  |
| 1.5 | District Name 1 ¢ญู |  |
| 1.6 | Province โ2ก |  |
| 1.7 | Name and Telephone number of <br>  <br>  |  |
| 1.8 | Questionnaire number on this date <br>  is: |  |

## 2. History ไひึกิิ



## 

> 3.1 How many people are part of your household? (those living in and those living outside but who send money to or receive money from home)

| 3.2 | How many male among the household people？โถีย1S <br>  |  |
| :---: | :---: | :---: |
| 3.3 |  |  |
| 3.4 | Ethnicity พิธนึสิกาคิกิบ | Phnong 蜙 $\qquad$ Kouy $\tilde{\sim}^{n}$ US $\qquad$ Steing试勾 $\qquad$ <br> Mil ษิญ $\qquad$ Kroal 1 กกึญ์ $\qquad$ T Thmorn $\underset{\sim}{\mathrm{U}} \mathrm{S}$ $\qquad$ <br> Khaonh 2円 $\qquad$ Tompuonn $\dot{q}$ $\qquad$ <br> Charay טinu $\qquad$ Kroeung［คึ้ํ $\qquad$ Kavet กิกฉก $\qquad$ Saouch స్ูู๊ $\qquad$ Lun $ฺ$ ல̣S $\qquad$ <br> Kachak ñตุกั่ $\qquad$ Praov 讯饰 $\qquad$ <br> Khmer iٌ $\qquad$ Cham ©ּ̛ $\qquad$ <br> Vietnamese 抣ถัณึย $\qquad$ Lao $\operatorname{sinl}^{2}$ $\qquad$ Other 畹战 9 $\qquad$ |
| 3.5 |  |  $\qquad$ <br> Khaonh 己己ળ゙ $\qquad$ <br> Charay טוกU $\qquad$ Kroeung โคึh $\qquad$ Kavet กิกนิกิ $\qquad$ Saouch ญ్ูู $\qquad$ Lun 0 STS $\qquad$ <br> Kachak ñฑุกั่ $\qquad$ Praov 1 TH $\qquad$ <br> Khmer $\mathfrak{i}$ 엉 $\qquad$ Cham © Ot $\qquad$ <br> Vietnamese 周ถิณณาษ $\qquad$ Lao sinl $\qquad$ <br>  $\qquad$ |

## 

| 4.1 |  <br>  <br> Crop షัฒึi: $\qquad$ \% <br> Livestock む่ตุิิตึ่ย: $\qquad$ \% <br> Orchard บ̊กาก: $\qquad$ \% <br> Fishing กึโโร สัร 9 : $\qquad$ \% <br>  $\qquad$ \% <br>  $\qquad$ \% <br>  <br>  $\qquad$ \% <br>  $\qquad$ \% <br>  $\qquad$ \% <br>  $\qquad$ \% <br>  $\qquad$ \% <br>  $\qquad$ \% <br>  $\qquad$ \% |
| :---: | :---: |

## 

| 5. | What is the construction material of the house? โบTกิ GiS $\qquad$ <br>  house roofed with tiles and fibrous cement주ำว <br>  $\qquad$ |
| :---: | :---: |

## Part $\mathfrak{\text { ig กis II }}$

FISHING, AQUACULTURE AND NUTRITION QUESTIONNAIRE


## 9. FISHING กึกรถูร



|  | 6. Borrowed money $\mathbb{M}$ S己 ટี̛̣ய <br>  <br>  $\qquad$ |
| :---: | :---: |
| 9.11 | What percentage of your household INCOME do you think comes from fish and fishing? <br>  $\qquad$ \% |
| 9.12 | What percentage of the meat (protein) eaten in your household do you think comes from fish? <br>  $\qquad$ \% |


| Fishing Income บัญูงถีกโกรสัร | Dry season (Feb-Apr) โนู้โกกิโ้ว <br>  | Flooding (May-July) <br>  (2ヘักา-กิกกิน) | Flood/rainy season (Aug.-Oct.) <br>  ( ถียை-กุดก ) | Flood recession (Nov.January) <br>  (วิเ్้ิกา-ษกัก ) |
| :---: | :---: | :---: | :---: | :---: |
| 9.13 Average monthly income from fishing <br>  ถีกากเญสัร |  |  |  |  |
| 9.14 Average monthly income from fish trading (retail, wholesale) ن்ญูกல ษบั่โ้ ฝึษผูรยตีการ <br>  லกั่นุ่ ) |  |  |  |  |
| 9.15 Average monthly income from fish processing โบกั่บัญูญช <br>  |  |  |  |  |

Do not include the catch of waged labor in fisheries for other people.



## 

9．17 What is the most important of your fishing gear（Number 1）？


 $\qquad$

| Questions ญัญูก | Dry season （Feb－Apr） <br>  กิ่ยู：－论むา | Flooding （May－July） <br>  2ヘิกิา－ก̃กกกน | Flood／rainy season <br> （Aug．－Oct．） <br> โนู้วสููก <br> โิ ญียา－กุดก | Flood recession （Nov．－January） โนู้วรึกึกโษกิ วิธิิิกา－ษกัก |
| :---: | :---: | :---: | :---: | :---: |
| 9．18 During what seasons do you use this gear？$($ yes $=1, \mathrm{no}=0$ ） <br>  <br>  |  |  |  |  |
| 9．19 How many days per month do you use this gear？โลี่รุกกโบบี <br>  |  |  |  |  |
| 9．20 What is the total weight（ kg ） of your catch per week？Include fishing activity of all household <br>  <br>  <br>  <br>  |  |  |  |  |
| 9．21 How many kilos of catch are <br>  <br>  <br>  ท์？ |  |  |  |  |
| 9．22 How many kilos of catch are <br>  <br>  สตู่า์？ |  |  |  |  |
| 9．23 What is the total sale value of fish catch（USD）per week？เลีกาก <br>  <br>  |  |  |  |  |


9000ก．กก๊

### 9.24 What is the most important of your fishing gear (Number 2)?

## 

(Examples: gillnets "mong kang"; fishing rod "santouch bobok"; cylinder trap "lop nhek sre"; handle




.กิ
9.30 What is the most important of your fishing gear (Number 3)?


| Questions ธั่ญูง | Dry season (Feb-Apr) <br> 纸สา | Flooding (May-July) <br>  <br>  | Flood/rainy season <br> Aug.-Oct. <br>  <br>  | Flood recession (Nov.-January) <br>  กิบิิกา-ยกักา |
| :---: | :---: | :---: | :---: | :---: |
| 9.31 During what seasons do you use this gear? ( $1=$ yes, $0=$ no) <br>  <br>  |  |  |  |  |
| 9.32 What is the total weight (kg) of your catch per week? Include fishing activity of all household members. โสี <br>  <br>  <br>  |  |  |  |  |
| 9.33 How many kilos of catch are eaten (own use) per week? เสีุ้̛쩡 <br>  <br>  |  |  |  |  |
| 9.34 How many kilos of catch are <br>  <br>  |  |  |  |  |
| 9.35 What is the total sale value of fish catch per week? (USD) โถีการ <br>  <br>  |  |  |  |  |


 $\qquad$ $\%$; menti้ㅔㅜ บุส $\qquad$
 $\qquad$
 $\qquad$ ..

## 

 $\qquad$ NO \＆่ กั่ $\qquad$
10.2 If yes，by whom is processing done？（sum should be 100\％）


| Men U̧โ̇ | Percentage： ฝึกาคึ่せิ＿＿＿\％ |
| :---: | :---: |
| Women โถู่ | Percentage： ฝึกาคึ่せ＿＿＿＿\％ |
|  |  |
| Total ${ }^{\text {®Tị }}$ | Percentage：ฝึกาคึ่แ＿＿＿＿\％ |


| Questions | Dry season （Feb－Apr） <br> 纸สา | Flooding （May－July） โนู้รึก๊ 2ล์สกา－ก๊กกกน | Flood／rainy season <br> （Aug．－Oct．） <br> โนู้วญูก <br> โ่ ญียา－กุดก | Flood recession （Nov．－January） <br>  วิธิิิกา－ษกก๊ |
| :---: | :---: | :---: | :---: | :---: |
| 10．3 During what seasons do you process fish？（ $1=$ yes， $0=$ no $)$ <br>  <br>  |  |  |  |  |
| 10．4 How many kg do you process per week？Include activity of all household <br>  <br>  <br>  |  |  |  |  |
| 10．5 How many kilos of processed fish do you eat per <br>  <br>  <br>  |  |  |  |  |
| 10．6 How many kilos of processed fish do you sell per <br>  <br>  |  |  |  |  |
| 10．7 What is the total sale value of fish processed and sold per week？（USD） <br>  <br>  <br> （ นุถูโรูโยงิกิ） |  |  |  |  |


กิ．กิ

| 10.8 |  <br>  |
| :---: | :---: |




## 


11.2 If yes, by whom is processing done? (sum should be $100 \%$ )


| Men บุโก์ | Percentage: ฝึกาคึงแ゙___\% |
| :---: | :---: |
| Women [กู่ | Percentage: ฝึ่ากึโญ___\% |
|  | Percentage: ฝึ่ากึโญ___\% |
| Total ${ }^{\text {UT¢T }}$ |  |


| 11.3 |  |
| :---: | :---: |
| 11.4 |  <br>  $\qquad$ \% |
| 11.5 |  <br>  $\qquad$ $\%$ |
| 11.6 |  ถีพยยูนิติโนดญษูร ? <br> Yes $\qquad$ No $\qquad$ |
| 11.7 |  <br>  $\qquad$ \% |


| Questions สำฬูร |  | Flooding (May-July) <br>  2ล์กิ-กิกก๊น | Flood/rainy season <br> (Aug.-Oct.) <br> โนู้วิึกู <br> โะ ธียา-กุดก | Flood recession (Nov.-January) <br>  วิธิิิกา-ษกก๊ |
| :---: | :---: | :---: | :---: | :---: |
| 11.8 For each of the past seasons, how many kilos of aquaculture fish did your produce? ถโยใช่งน్ <br>  <br>  |  |  |  |  |
| 11.9 How many kilos of the production are consumed by the <br>  <br>  [ヘึูส) |  |  |  |  |
| 11.10 How many kilos of the <br>  <br>  |  |  |  |  |
| 11.11 What is the total sale value of aquaculture fish production for this system per season? <br>  Uิં |  |  |  |  |


| 11.12 |  <br>  |
| :---: | :---: |
|  |  |


| 11.13 |  <br>  |
| :---: | :---: |
|  |  |

## 





| Focus on the whole year 1迩ติ <br>  | Dry season （Feb－Apr） โนู้โกิก ใั้ กุยู：－โษถา | Flooding （May－July） <br>  <br>  | Flood／rainy season <br> （Aug．－Oct．） โนู้วสกูก โ่ ญีทั－กุดก | Flood recession （Nov．－January） โนู้รึกึกกิโยก๊ วิญิิิกา－ษกก๊ |
| :---: | :---: | :---: | :---: | :---: |
| 12．1 Not enough rice f．โ్గ $\}$ โคก่ง่การ่ |  |  |  |  |
| 12．2 Not enough vegetable UTiS ษิรโคก่งกาต่ |  |  |  |  |
| 12．3 Not enough fish โดี่ยิรโคน่ง่ โค่ง่ |  |  |  |  |
| 12．4 Not enough meat ถึบั่ษิญ โคต่ยู่โค่ร่ |  |  |  |  |



|  | $\begin{gathered} \text { Neve } \\ \mathbf{r} \\ \text { 甘ิS } \\ \text { 甜 } \end{gathered}$ | Sometimes （1－10 times） โMலた己゚ ：（1－ 10 W้ฟ ） |  | Daily <br> กิั่ <br> 谓 |
| :---: | :---: | :---: | :---: | :---: |
| 12．5 In the past four weeks＝ 30 days，did you worry that your household would not have enough food or <br>  <br>  <br>  กึด ？ |  |  |  |  |
| 12．6 In the past four weeks，did you or any household member increase fishing，especially to get more food <br>  <br>  <br>  โกิ้สาร？ |  |  |  |  |

12.7 In the past four weeks, did you or any household member increase gathering of snails, crabs, shell-fish, morning glory, water lilies, or wild lotus, especially to






|  |  |  |  |  |
| :--- | :--- | :--- | :--- | :--- |
|  |  |  |  |  |
|  |  |  |  |  |

## 

Ask respondents to recall if they ate the following food items over the past 7 days. Items could be smoked, dried, salted, fermented or have undergone any other preservation technique. Amounts reported are for the whole household.


 $\qquad$

|  | 12.8 Number of days eaten over <br>  <br>  | 12.9 Quantity in (Kg) (Last 7 days in total) ஸิติยณ <br>  |
| :---: | :---: | :---: |
| Fish [ิี่ |  |  |
| Aquatic animals e.g. Snails, Shellfish, Crabs and Snakes 2je , โัٌ, กิย ลิพิตสั่ |  |  |

 500 โกาย

## Part ำสกำกี III <br> 


 $\qquad$ No is $\qquad$

| 14 | Description of CF ติตผักโ์่ตี สิ．ร |  |
| :---: | :---: | :---: |
| 14.1 | What is the name of the CF？ก กีี <br>  |  |
| 14.2 | Where is it located？เกียยร ธี กำเ <br>  | Village กูษิ $\qquad$ Commune Ự $\qquad$ <br> District $\left[\begin{array}{\|c\|c} \\ \pi\end{array}\right.$ $\qquad$ Province 侥 $\qquad$ |
| 14.3 | Total area of CFi（ha）：もاS触完 <br>  |  |
| 14.4 | TOTAL number of CFi members <br>  |  |
| 14.5 | Number of FEMALE CFi members טิธ โญิ่ | $\qquad$ งกก่ <br> Unknown f่ร่ <br> 认ึ $\qquad$ |


| 15 |  กิโล む． |  |
| :---: | :---: | :---: |
| 15.1 | Has the government（such as fisheries cantonment） provided technical assistance to the establishment of <br>  <br>  <br>  |  |
| 15.2 | Has some organization（such as an NGO）supported <br>  <br>  <br>  |  |
| 15.3 |  ญิงัง |  |
| 15.4 | Are there CFi by－laws and internal regulations $\mathfrak{\mathcal { O }} . \mathfrak{S}$ <br>  |  |


| 15.6 | Have boundaries and mapping of the community <br>  <br>  |  |
| :---: | :---: | :---: |
| 15.7 | Is there a Community Fishery Area Agreement? โลี <br>  |  |
| 15.8 | Has there been registration and recognition of the community fisheries by FiA and MAFF? โสียสรการ <br>  <br>  |  |
| 15.9 | What year was the CFi registered? โสี む. § MT บุ: <br>  |  |
| 15.10 | Is there a Community Fishery Area Management <br>  |  |
| 15.11 | Are there rules and internal regulations for fisheries <br>  <br>  |  |
| 15.12 | Are there rules and regulations against illegal <br>  <br>  |  |
| 15.13 | Does the CFi have an activity plan for the next six <br>  <br>  |  |
| 15.14 |  <br>  |  |
| 16.15 | What is the size of the conservation area? เสีกีกโํํํ <br>  |  |
| 15.16 | Is the conservation area useful for the conservation <br>  <br>  |  |
| 15.17 | Are there conflict over fisheries, fishing area and other resources in the area? โดียารผ่โดาะโชีการ <br>  <br>  |  |
| 15.18 |  |  |


| 15.19 | Does the CFI has a mechanism to resolve conflicts？ <br>  |  |
| :---: | :---: | :---: |
| 15.20 | Does the CFi help to resolve conflict in the <br>  ผึヤ๙ญโร ？ |  |
| 15.21 |  <br>  |  |
| 15.22 |  คีฝึบตูเร？ |  |
| 15.23 |  <br>  |  |
| 15.24 | What percent（\％）of total annual fish harvest comes <br>  <br>  5世？ | \％ |
| 15.25 | Is the government taking effective action to reduce <br>  <br>  | None f่งั่（ $0 \%$ ）Some2 ${ }^{\circ}$ ：（50\％）A great deal แสิฐูกาต（100\％） $\qquad$ \％ |
| 15.26 | Does the Community Fisheries Committee work to <br>  <br>  | None fo แญิฐูกาต（100\％） $\qquad$ \％ <br>  |
| 15.27 |  <br>  |  Sometimes 2： $\qquad$ <br>  $\qquad$ |
| 15.28 |  <br>  |  $\qquad$ Remained the same โึીน゙นึヤ $\qquad$ orƯ decreasedưTHȚְ： $\qquad$ <br>  <br>  $\qquad$ |
| 15.29 | Is there any enforcement of the rules and internal <br>  <br>  <br>  | None fo่่（ $0 \%$ ）Some 2 ${ }_{\sim}^{2}:(50 \%$ ）A great deal แิ่ิิฐูตต（100\％） $\qquad$ \％Unknown ค่ก่่นึ้น $\qquad$ |
| 15.30 | Can the CFi punish those who break the rules and <br>  <br>  | No is $\qquad$ <br>  $\qquad$ |


|  |  |  $\qquad$ Unknown <br>  |
| :---: | :---: | :---: |
| 15.31 |  ณึ? | Unknown ffถั่ |
| 15.32 | Does the CF know what to do when poachers are <br>  <br>  | Unknown ficiex ix _ _ |
| 15.33 | What was the compliance with fishery rules FIVE <br>  <br>  | No one obeys the fisheries rules $\qquad$ <br>  $\qquad$ <br> Some people obey the rules $\qquad$ <br>  $\qquad$ <br> Everyone obeys fisheries rules $\qquad$ <br>  $\qquad$ <br>  $\qquad$ |
| 15.34 | What was the compliance with fishery rules NOW? <br>  <br>  | No one obeys the fisheries rules $\qquad$ <br>  $\qquad$ <br> Some people obey the rules $\qquad$ <br>  $\qquad$ <br> Everyone obeys fisheries rules $\qquad$ <br>  $\qquad$ <br>  $\qquad$ |
| 15.35 | Are there indigenous people (non-Khmer) in the <br>  <br>  |  |
| 15.36 | If yes, are there indigenous people members of the <br>  <br>  |  |
| 15.37 | Is your participation to the CFi operation <br>  <br>  |  |
| 15.38 | Is corruption an issue in the CFI management? 识 <br>  <br>  |  |
| 15.39 | Have CFi members received any training or awareness raising on gender concept, gender issues <br>  <br>  |  |


|  |  <br>  |  |
| :---: | :---: | :---: |
| 15.40 | Have you heard about FiA's gender mainstreaming policy and action plan for the fisheries sector? เตี่ริก <br>  <br>  | Yes 代S_No f\% |
| 15.41 | Do women participate actively in Community <br>  <br>  |  <br>  <br>  |
| 15.42 | What are your suggestion to improve the active participations of women in the CFi ? โลี่fุสกยาร <br>  <br>  |  |
| 15.43 | Do indigenous people (if any) participate actively in Community Fisheries activities? โลีนีงโึติโนี่ยกิกาก <br>  | Yes ETS $\qquad$ _No $\mathfrak{H}$ ตั่ $\qquad$ Unknown f่ั่ พ็ $\qquad$ |
| 15.44 | What are your suggestion to improve the active participations of indigenous people (if any) in the CFi? <br>  <br>  <br>  |  |



| 16.1 |  กกิยูலనินิิิ? |  |
| :---: | :---: | :---: |
| 16.2 |  <br>  | Yes ヒTS__No f\% |
| 16.3 | If yes, how is the CFi financed? <br>  ณึยกกอั: ? |  <br>  $\qquad$ <br>  $\qquad$ <br> Donor ધู่ส่พิ่ $\qquad$ <br> Peoples โินึนล $\qquad$ <br> Companies $ก$ กุ่ยกุ̃S $\qquad$ <br> Church โต๐วิ่บา $\qquad$ <br>  $\qquad$ |


|  |  | Unknown fはヘั่ |
| :---: | :---: | :---: |
| 16.4 | Does the CFC manage finances well？ใสี คิ．む．โ <br>  |  |
| 16.5 | Are the finances record（income and expenditures） of the CF available for all members to examine？ <br>  <br>  |  |

## 

| 17.1 | Is there a Community Fisheries COMMITTEE？䜣 UTS กั．む．S ？ |  |
| :---: | :---: | :---: |
| 17.2 | Are you a member of the Community Fishery <br>  |  |
| 17.3 | TOTAL NUMBER of Committee members $\mathfrak{U}$ ©̂S <br>  |  |
| 17.4 | Any specific quota for female for committee <br>  <br>  |  |
| 17.5 |  <br>  |  |
| 17.6 | Positions of FEMALE committee members <br>  | CFC chief［UWTS＿＿Vice chief［UผTS $\qquad$ Accountant $\mathfrak{\sim} ณ 1$ iS $\qquad$ Extension <br>  $\qquad$ <br>  ญูกั๊ $\qquad$ Unknown 的宽解 |
| 17.7 |  <br>  UTS？ |  |
| 17.8 | How often does the CFC meet with members？ <br>  |  |
| 17.9 |  <br>  |  |
| 17.10 | Does the CFC coordinate with commune council or <br>  <br>  |  |


| 17.11 | Does the CFC Develop networks with other CFs and <br>  <br>  |  |
| :---: | :---: | :---: |
| 17.12 | Does the CFC engage with women in the <br>  むบกคึยన์บิโร？ |  |
| 17.13 | Does the CFC engage in community development <br>  <br>  |  |
| 17.14 | Were elections and re－elections for the CFC open to <br>  むโt |  |
| 17.15 | Does the CFC represent all affected groups in fisheries management decision－making？เสีกถ่กิสโโยบิกิ <br>  <br>  | Yes ビS＿＿Noff |
| 17.16 | Are decisions by the CFC made openly or <br>  <br>  |  |
| 17.17 | How fair was the allocation of access rights FIVE <br>  <br>  | Unfair $\qquad$ <br>  $\qquad$ <br> Some unfairness $\qquad$ <br>  $\qquad$ <br> Completely fair <br>  $\qquad$ <br>  $\qquad$ |
| 17.18 | How fair was the allocation of access rights NOW？ <br>  ƯTS？ | Unfair $\qquad$ <br>  $\qquad$ <br> Some unfairness $\qquad$ <br>  $\qquad$ <br> Completely fair <br>  $\qquad$ <br> Unknown 低定路 $\qquad$ |
| 17.19 | （For female）Do you have any difficulty in performing your task on the committee？（See the <br>  <br>  <br>  <br>  |  |



## Note: mention










| 18 |  |  |
| :---: | :---: | :---: |
| 18.1 | Has your access to the river to fish improved as a <br>  <br>  Uic? | Yes ビS__No \& ¢ |
| 18.2 | Do you think that being a member of the CFi has helped you to socially and economically benefit <br>  <br>  <br>  |  |
| 18.3 |  <br>  $\qquad$ More income UTS ั่ถูญญโบี่S $\qquad$ <br>  $\qquad$ Alternative livelihood โUTบิ ตู่ษนึ่ริก |  |


|  |  |  |
| :---: | :---: | :---: |
| 18.4 | How would you describe the condition of the fish <br>  <br>  |  $\qquad$ bad <br> โึโก̃ก $\qquad$ neither good nor bad 豸ิనひึญู <br> บู์nโก̃กั่ $\qquad$ good＠̣ $\qquad$ very goodญ̛ ณาย่ $\qquad$ Unknown 持育解 $\qquad$ |
| 18.5 | How would you describe the condition of the fish <br>  <br>  | Very bad fiñกั่ณาむ่ $\qquad$ bad <br>  $\qquad$ <br>  <br> บูำกกก กั่ $\qquad$ good Ơ $\qquad$ very good ญ̛̣ ณักั่ $\qquad$ <br>  $\qquad$ |
| 18.6 | Do you feel that the CFi has improved the fish <br>  <br>  |  |
| 18.7 | What would you say about the management of the <br>  <br> 等安S？ | Fish resource not managed $\qquad$ <br>  $\qquad$ <br> Some management initiatives $\qquad$ <br>  $\qquad$ <br> Good initiatives $\qquad$ <br>  $\qquad$ <br> Good sustainable management $\qquad$ <br>  กึ๓ $\qquad$ <br>  $\qquad$ |
| 18.8 | What would you say about the management of the <br>  <br>  | Fish resource not managed $\qquad$ <br>  $\qquad$ <br> Some management initiatives $\qquad$ <br>  $\qquad$ <br> Good initiatives $\qquad$ <br>  $\qquad$ <br> Good sustainable management $\qquad$ <br>  กัต $\qquad$ <br>  $\qquad$ |
| 18.9 | Do you feel that the CFi has improved the habitats （wetlands，flooded forests）for fish in the area？ <br>  <br>  <br>  |  |

## 

| 19.1 | Do you feel that the condition of the fish resource is stable or has improved thanks to management? <br>  <br>  iS:ig? |  |
| :---: | :---: | :---: |
| 19.2 | Do you expect the fishery to maintain its current level <br>  is <br>  |  |
| 19.3 |  |  |
| 19.4 | In your opinion, how can the management of fisheries be improved (recommended action for fish stock sustainability and better social organization)? <br>  <br>  |  |

## 

| 20.1 | How do you usually receive information relating to economic and fisheries management related activities? (Rank in order of frequency: 1 to 9 , noted from rank number 1 for information is often received until number 9 for information is less received). <br>  <br>  <br>  $\qquad$ <br>  b. Groups, association, network (CF, Community Base Organization) CBO, and other groups) <br>  <br>  <br>  <br>  <br>  <br>  $\square$ <br>  $\square$ <br>  |
| :---: | :---: |


| 20.2 | Do extension agents contact you or any women fishers to provide technical information or market information for your fishing and aquaculture? <br>  <br>  <br> - Yestors $\qquad$ <br> - No fị̆ $\qquad$ |
| :---: | :---: |
| 20.3 | In your opinion, do you feel that the local administration is helpful to you if you request any assistance, especially with respect to CFi conflicts? <br>  <br>  <br> - Yes 时S $\qquad$ <br> - No fは $\qquad$ |
| 20.4 |  What is the challenge FOR WOMEN to access information and services <br>  |
| 20.5 | What are your recommendations to improve the extension service? <br>  |

## Background

The project "Mekong Integrated Water Resources Management - Phase III" is funded by the World Bank. The objective of this project is to establish the foundation for effective water resource and fisheries management in the northeast of Cambodia. Within this project, Component 1 (Fisheries and aquatic resources management in Northern Cambodia) is executed by the Fisheries Administration and implemented by the Inland Fisheries Research and Development Institute. The objective of this component is to improve the management of fish and aquatic resources in selected areas in Kratie and Stung Treng provinces.

