

KINGDOM OF CAMBODIA

Nation Religion King

MINISTRY OF AGRICULTURE, FORESTRY AND FISHERIES

FISHERIES ADMINISTRATION



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

PROJECT GUIDELINES

Guidelines for Community Fisheries development in Cambodia



2018

Inland Fisheries Research and Development Institute

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April 2018

CONTENTS

1	INTRODUCTION.....	3
1.1	The M-IWRMP-III and Component 1.....	3
1.2	Purpose of this manual	3
1.3	Structure of the manual	4
1.4	Safeguards.....	4
1.5	Gender perspective	5
2	ESTABLISHING A COMMUNITY FISHERY	6
3	Community Fishing Area Management Plan	13
3.1	Whitefish and Blackfish	13
3.2	Community Fisheries Area Management Plan	14
3.3	Community Fishing Area Management Plan Implementation.....	22
3.3.1	Conflict Management	23
3.3.2	Enforcement and Compliance	23
3.3.3	Livelihoods	24
3.3.4	Networking	25
	Annex A: Community Fisheries and Co-management	25
	Annex B: Community Fisheries and an Ecosystem Approach to Fisheries.....	27
	Annex C: Safeguards Instruments	28
	ANNEX D: Documenting Consultation Meetings	28

1 INTRODUCTION

1.1 The M-IWRMP-III and Component 1

The objective of the Mekong Integrated Water Resources Management Phase III (M-IWRM III) Project 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 will be 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 IFRDI/FiA as Implementing Agency.
- 2) Component 2: Support for River Basin Management in the 3S 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 the direct uses of the 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 IFRDI/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.

1.2 Purpose of this manual

This manual is aimed at the CFI and CFC members and the Project's national consultants and Implementation Team that will work together to establish effective community fisheries in the Project area. It provides a step-by-step approach to establishing a community fisheries and to implement an effective fishing area management plan using an ecosystem approach to fisheries management

(EAFM). It builds on experience with establishing and implementing community fisheries in Cambodia and international guidance on fisheries co-management and EAFM. The manual is based on national community fisheries legislation and policy such as:

- Provisions of the Law on Fisheries Related to Community Fisheries
- Royal Decree on the Establishment of Community Fisheries
- Sub-decree on Community Fisheries Management
- *Prakas* on the Community Fisheries Guidelines

This manual can be read and used on its own. However, there are other publications that might be useful when preparing and implementing the management plan. These include:

- Coral Triangle Regional Ecosystem Approach to Fisheries Management (EAFM) Guidelines (Pomeroy et al., 2013);
- Fisheries co-management: a practical handbook (Pomeroy and Rivera-Guieb 2006);
- Managing Small-Scale Fisheries: Alternative Directions and Methods (Berkes et al., 2001);
- How to Develop a Fisheries Management Plan (Diffey, 2015);
- Management Guidelines for Asian Floodplain Rivers (Hoggarth, 1999)
- A Simple Guide to Writing a Fishery Management Plan (Hindson et al., 2005)
- Stock Assessment for Fisheries Management (Hoggarth et al., 2006)
- A Fishery Managers Guidebook (Cochrane, 2002).
- Other publications produced by the Food and Agriculture Organisation (FAO) of the United Nations such as the FAO Code of Conduct for Responsible Fisheries, the series of Technical Guidelines for Responsible Fisheries.

1.3 Structure of the manual

This manual provides guidance for a nine-step process to establish a community fisheries based on the *Prakas* on community fisheries guidelines from establishing a founder group and request for community fisheries establishment (Step 1) to community fishing area management planning (Step 9) and implementation to the fishing area management plan. The manual provides guidance for preparing a fishing area management plan using an EAFM and approaches and measures to implement the plan.

Additional information to support community fisheries are provided in several annexes to the manual:

- An overview of community fisheries and co-management including conditions for successful co-management, and the role of community fisheries members and government in co-management.
- An overview of an ecosystem approach to fisheries management (EAFM) and community fisheries.
- Guidance in assessing community fisheries including defining a fully functional community fisheries and monitoring and evaluation.
- Guidance on strengthening community fisheries and community fisheries committee.

1.4 Safeguards

The Mekong 3's ESMF provides policy guidance and instruments that are applicable for managing risks and adverse impacts from the project activities. For each step of the process of establishing a community fisheries, the framework will be applied to ensure social and environmental sustainability for all proposed activities resulted from the project. Specific procedures for the application of these policies are outlined in the project Environmental and Social Management Framework, Resettlement Policy Framework (see full documents in Annex C), and the Indigenous Peoples Planning Framework.

The formulation of the CFIs will have to ensure that people from vulnerable groups and Indigenous people (IP) are included in the consultation and as representatives of the CFIs. The CFI Committee should be representative of the membership, especially if there are ethnic/indigenous groups present. The CFI management plan should function as the access restriction plan (and where relevant an indigenous peoples / ethnic minority development plan) for each community. This means the CFI management plan would be developed in a participatory manner, as required by the Resettlement Policy and Indigenous Peoples Planning Framework (see annex C). The socio-economic assessment, conducted during the CFI needs assessment phase, will identify those most impacted by any restrictions imposed, and rank them by income level, and vulnerability to poverty due to reduced fish catch. Those identified as being most severely impacted and vulnerable to poverty will be prioritized for livelihoods assistance.

Where a CFI has already been established, the membership of the CFI Committee will be reviewed by the Project Social Safeguards Consultant to ensure it is representative (in terms of gender, ethnicity, and vulnerability) of the CFI membership. If it is not representative, the Project Social Safeguards Consultant will provide recommendations on how best to reconstitute the committee in order to qualify for project support.

Similarly, if the CFI needs assessment phase did not conduct a socio-economic assessment, sufficient for identifying those most impacted by the possible restrictions, then the socio-economic assessment will be repeated, with the support of the project.

Similarly, the CFI management plan needs to meet the requirements specified in the resettlement policy framework and indigenous people planning framework for an access restriction and indigenous people / ethnic group development plan. In practice, this will mean that the main elements of indigenous people development plan and access restriction plan are incorporated into the CFI management plan.

Relevant safeguards documents (including the CFI management plan) will be disclosed in a language and location that accessible to [the peoples](#) (including IP and vulnerable groups) and communities likely to be affected by project activities prior to the commencement of these activities. In practice this will mean that the plan will need to have been consulted with those using the community fisheries in at least 2 public meetings. One meeting will be to elicit feedback from the people likely to be affected, and the other meeting will be to vote on its adoption (with at least 70% of those using the community fisheries). These meetings will need to be documented, and demonstrate evidence of sufficient representation in terms of gender, ethnicity and vulnerability. Whether or not the consultation is sufficient to confirm with the requirements of the indigenous peoples planning and resettlement policy framework, will be assessed by the project social safeguards specialist. Throughout the consultation process, the CFI management plan will be available at the Village Office or a Central location. An example of how consultation can be documented is presented in Annex D.

1.5 Gender perspective

A gender perspective is included in the process of establishing the CFI to ensure that women will stand as candidates for the CFC and that there are equal opportunities for men and women to participate in fisheries decision-making. Women need to be consulted in establishing the founder group and being CFI members. The gender perspective in fisheries and aquaculture training will be provided and run by the Women Focal Points with the support of the Fisheries cantonment and FiA to ensure that both men and women benefit from the project. The role of women and their issues and needs in the fisheries and aquaculture sectors should be identified to understand the gap of existing practices and what is needed to support the achievement of gender equality in fisheries and aquaculture through

gender assessments, along with baseline surveys. Women's Leadership, Gender Perspectives in Fisheries and Aquaculture, Gender-Based Violence, and Fishery Livelihoods training should be provided to CFC members and CFI members for their empowerment. It is important to understand women's livelihoods in fisheries and aquaculture as they have many responsibilities including caring for their children and their families. Therefore, separate meetings with women's groups should be held to understand women's needs in improving their living standards.

Support is provided by the Commune Women and Children Focal Points who are working very closely with women and children in the communities. Women and Children Focal Points will work closely with fisheries cantonment to strengthen the ability of CFC and CFI members to adopt a gender perspective in fisheries and aquaculture and empower women to participate in fisheries and aquaculture.

The Gender Action Plan for Fisheries and Aquaculture Project was established by FiA to advise the Fisheries Cantonments and Women and Children Focal Points, as well as inform people on how to integrate a gender perspective into the project. Monitoring the implementation of the gender action plan will regularly be undertaken to ensure that it is progressing.

2 ESTABLISHING A COMMUNITY FISHERY

Both the Sub-decree on Community Fisheries Management and the *Prakas* on the Community Fisheries Guideline provide guidance for establishing a community fisheries.

The Sub-decree states (Chapter 2, Article 6) that:

“All Cambodian citizens have the rights to form Community Fisheries in their own local area on a voluntary basis to take part in the sustainable management, conservation, development, and use of fisheries resources.

A community fisheries as mentioned in this Sub-Decree is a group of physical persons holding Khmer citizenship who live in or near the fishing area, voluntarily established and taking the initiative to improve their own standard of living by using and processing fisheries resources sustainably to contribute to economic and social development and poverty alleviation.

The Fisheries Administration and local authorities or Commune/Sangkat councils, shall cooperate together to establish community fisheries.”

There are nine (9) steps in establishing a community fisheries as stated in the *Prakas*.

An additional step, awareness raising, (Step 1a) is suggested to enhance the establishment of a community fisheries

Step 1: Establish a founder group and request CFI establish

A local community who wants to establish a community fisheries must establish a group of founders, selecting them from among the people in the area where they live, and they must examine the qualities of each individual to see that they are consistent with the needs of the people, facilitated by village and commune/sangkat authorities, the local Fisheries Administration, and relevant authorities (Article 2). Members of ethnic groups and other minority groups, and women, should be included in the selection of the group of founders.

Members of the group of founders who are selected must submit a request in writing to establish a community fisheries to the Fisheries Cantonment, via the commune/sangkat chief, Sangkat Fisheries Administration and Division Fisheries Administration, attaching a draft temporary hand-drawn map of the area requested (Article 3).

The group of founders has the duty to organize all work for the initial founding congress of the community fisheries, beginning with preparation up until completion, as follows (Article 6):

- Prepare invitations for participation in the congress
- Set the time and agenda and select the site of the congress
- Prepare documents related to the congress
- Prepare draft by-laws and internal rules of the community fisheries in a consultative way
- Prepare names of candidates for the election organizing committee
- Prepare names of candidates to stand for election of the community fisheries committee who have been selected as representatives of local residents
- Prepare the name of the community fisheries
- Organize various meetings related to preparation for the congress
- Prepare the process of the congress

Members of the group of founders have the right to stand as candidates for selection to the community fisheries committee. Women are encouraged to stand as candidates for members of the group of founders.

Step 1a: Awareness raising through environmental education, capacity development and social communication

The *Prakas* states (Article 7) that: “The members of the group of facilitators and members of the group of founders must organize awareness raising activities among residents in the local area on the benefits of establishing community fisheries, so that at least more than half of the total number of fishing families in that area will volunteer to submit applications to become members of the community fisheries. In the event that the number of people who join does not reach a majority as per the above requirement, it is necessary to persevere further in raising awareness.”

While many residents have an awareness and concern for fisheries and the environment, some may not and the issues of establishing a CFi are generally complex. This may be especially true for ethnic and other minority groups. There may be a need to provide more technical information on fisheries and ecosystems, and to develop people’s capacity to actively participate in the CFi management planning process.

The purpose of this step is to empower people with the knowledge and skills they need to consider applying to be volunteers of the CFi and to actively participate in the CFi. Women are encouraged to apply to be volunteers of the CFi.

Empowered people will be enabled to begin to take greater control over resource, economic, and social problems and needs, and increase their awareness and understanding of fisheries resources and their management in an ecosystem context.

Environmental education, capacity development, and social communication are integral and necessary parts of establishing a CFi and should be adaptively undertaken throughout the planning process.

Environmental education introduces concepts and principles related to fisheries and ecosystem issues, as well as empowers communities with information and knowledge to assist them in making a decision to participate in the CFi and taking appropriate actions to address the issues.

Capacity development provides skills and institutional capacity for CFi members and government officials and staff to take an active role in a CFi.

Social communication generates an on-going flow of information and dialogue between and among fishers and CFI members to facilitate informed decision-making in the face of change.

Step 2: CFI site needs assessment

As stated in the *Prakas*, “Before preparing to develop the plan, the Group of Founders should conduct a study and collect accurate information on: (a) the socio-economic situation of local people; (b) the situation with regards to fishing; (c) the nature of the fishing grounds; (d) activities related to fishing; (e) the situation with regards to agriculture; and (f) problems that arise in the community fisheries related to the fisheries sector. (Chapter 9, Article 23)

A site needs assessment serves as a basis for planning and management activities and as a baseline for future monitoring activities. A site needs assessment involves collecting information about the fishery, ecosystems, resource-use activities, gender, and people. During this activity, both secondary and primary (through scientific research, if practical, and through participatory research) data are collected and analyzed and a site needs assessment is prepared.

The decision on the scope and scale of the site needs assessment is made by the Group of Founders, based on information needs for decision-making and on available resources and time.

A typical site needs assessment includes:

- Resource and ecological assessment (REA) – includes biological and physicochemical parameters used to determine the status of the ecosystem. The REA content can include information on geophysical setting of the area (land; soil; runoff; habitat classifications; forests, rivers and watershed; river flow patterns); ambient environment (water quality, turbidity, light penetration); climate (seasons, rainfall, winds, temperature, cloud cover); important habitats; fish and other aquatic life; resource use patterns (terrestrial and aquatic uses); technical attributes of the fishery (type, boats, gear, species harvested, level of exploitation); and history of resource use.
- Socio-economic assessment (SEA) – identify social, cultural, economic and political conditions of individuals, households, groups, communities and organizations. Socio-economic parameters which can be included in a SEA are resource use patterns; stakeholder characteristics; economic and political power relations; productive assets characteristics; gender issues; stakeholder perceptions; indigenous knowledge; livelihoods; community services and facilities; market attributes for extractive uses of resources; market attributes for non-extractive uses of resources; and non-market and non-use values.
- Gender Assessment - identify women and men’s role in the fishery and aquaculture sector and constraints for women’s participation in the CFI committee, as well as being CFI members. The assessment will identify the gender gap analysis, women’s needs for improving their livelihood, and the existing support system with regard to gender integration in community fisheries and aquaculture.
- Legal and institutional assessment (governance) (LIA) - identify and analyze the organizations and governance structure for resource management in the community. Parameters which can be included in a LIA include political context; external to the community institutional and organizational arrangements (international, national, regional, provincial, municipal, village); community institutional and organizational arrangements; incentives for cooperation among resource users; extent of stakeholder participation; extent of co-management; and macroeconomic/political/sociocultural/natural factors.
- Issues, needs and opportunities assessment - The emphasis is on identifying root causes of community and fisheries issues, problems and opportunities and agreeing upon them before solutions are identified and actions are taken. This assessment should focus on identifying both wider community and fisheries specific issues, problems and opportunities.

Step 3: Dissemination and registration of CFi members

The group of founders has the duty to register people who volunteer to participate as members of the community fisheries. (Article 6)

The group of founders must assess whether the community members are ready to embark and commit to the CFi process. The three key components are: 1) an awareness of the problems with fisheries and the environment; 2) a concern about these problems; and 3) a willingness to take actions to solve these problems. It should also be determined if the community (or communities) is cohesive- that is, there are no serious internal disputes that would render establishing a CFi difficult.

To participate in community fisheries, the group of founders will need to organize the community members and reach internal consensus on the interests and concerns that they want brought forward. Meetings and discussions are held to inform community members about community fisheries and to identify and clarify their interests and concerns. For those individuals with common interests and concerns, the group of founders work to organize community members into a community fisheries.

Step 4: Preparation of vision statement and CFi by-laws and internal rules

Chapter 3, Article 8 states that: The members of the group of facilitators (Fisheries Cantonment) and members of the group of founders must organize consultation meetings with local residents on draft by-laws and internal rules in order to submit them to the congress for approval.

During the initial meetings in the preparation of CFi by-laws and internal rules, a vision statement for the community fisheries should be developed. The vision statement describes what members want the community fisheries to look like in ideal terms in the future - the results they will be achieving through community fisheries or the desired outcome of community fisheries. The strategic vision statement provides direction and inspiration for goal setting. It answers the question, "if we can achieve what we want to do, what will we look like in xx years time?"

The by-laws:

- Define the framework for sustainable management, protection, conservation, development, and use of fisheries resources of the community fisheries
- Serve as a fundamental policy and mechanism for the functioning of the community fisheries
- Protect the rights and benefits of members of the community fisheries and the public benefit

The by-laws specify:

- Conditions for becoming a member, obligations and rights of members
- Criteria and conditions for resignation and dismissal of members
- Arrangements for bookkeeping and maintaining documents
- Community fisheries committee
- The meetings of the community fisheries committee
- Congress of the community fisheries
- Elections of the community fisheries committee
- Conditions for dissolution of the community fisheries and procedures for dispute resolution
- Procedures for amending the by-laws and internal rules of the community fisheries

The internal rules specify the rules that community fisheries members must follow such as being honest and united; punishment; participation in congresses; reporting of fishing assets; suspension or expulsion of membership; and rights of non-community fisheries members.

Step 5: Process of the initial founding congress of CFi to elect the CFC

The congress of the community fisheries is the highest-level meeting for all ratifications and decision-

making in the name of the community fisheries (Chapter 4, Article 10).

Congresses of the community fisheries include:

- The initial founding congress of the community fisheries, that is organized by the group of founders, and is held in order to elect the community fisheries committee;
- Ordinary congresses that are held once a year; and
- Extraordinary congresses that are held as needed by the community fisheries.

A distinguished panel for the congress is selected by the community fisheries members with the duties of:

- Leading the entire congress
- Requesting the congress to approve important matters related to the course of the congress
- Requesting the congress to approve important matters that have been discussed according to the agenda

The initial founding congress of the community fisheries, organized in order to elect the community fisheries committee, has the following main agenda items (chapter 5, Article 12):

- Approving the members of the community fisheries
- Approving the name of the community fisheries
- Approving the by-laws and internal rules of the community fisheries
- Selecting and approving the election organizing committee
- Approving the number of community fisheries committee members
- Approving the number and names of candidates to stand for election to the community fisheries committee
- Instruction on how the election will be held
- The election process
- Announce the results of the elections
- Comments and pledge by a representative of the community fisheries committee that was just elected

The time of the congress should recognize the work patterns of women and not conflict with it in order that women can attend and participate in the congress. If some women are members of the CFC, they can share women's needs and concerns regarding fisheries and aquaculture or other gender-based violence issues for the development of other CFC male members. Representation of women at CFC may serve as a good example for other women to participate in fisheries and aquaculture. It is suggested that 25% of CFC members should be women.

The duties of the election organizing committee are:

- Explain the method of election to the congress
- Oversee the election until it is completed
- Report on the result of the election and hand the program and documents over to the distinguished panel

Selection of the community fisheries committee shall be done based on articles 17 (number of members of the CFC shall be odd, from 5 to 11, and women encouraged to stand as candidates) and 18 (candidates for the CFC must be members of the community fisheries and Khmer citizens from birth) of the Sub-Decree on Community Fisheries Management. The number of candidates for the community fisheries committee must be at least three more than the number of members of the community fisheries committee to be selected. In the event that the community fisheries includes several villages, candidates for the committee shall be selected from all of those villages. The term of the group of founders ends automatically after the new community fisheries committee has been appointed.

One month prior to the end of the term of office of the community fisheries committee, the community fisheries committee must select an election organizing committee and candidates to stand for election, in order to prepare to organize a congress to elect a community fisheries committee for the new term, which will follow the same process as the initial founding congress.

While developing the fishing area management plan is Step 9, once the CFC has been elected, the process of developing the fishing area management plan can be started.

Step 6: The delineation of boundaries and mapping of community fishing areas

As stated in the *Prakas* (Chapter 6, Article 17), “The delineation of boundaries and mapping of community fishing areas must involve thorough consultation in the local area of the community fisheries. A committee to delineate the boundary, prepare the map of the community fishing area, and resolve conflicts shall be set up and led by the central-level Fisheries Administration with the following membership:

- | | |
|---|--------------------|
| - Director of the central-level Fisheries Administration or a representative | as chairman |
| - Fisheries Cantonment Chief | as deputy chairman |
| - Relevant District Chief | as deputy chairman |
| - Chief or member of the relevant commune/sangkat council | as member |
| - Village chiefs in the relevant local communities | as members |
| - Representatives of the community fisheries committee | as members |
| - Representatives of committees of community fisheries that adjoin the community fishing area | as members |
| - Owners of fishing lots that are adjacent to the community fishing area | as members |
| - Elder fishers in the area | as members |

If necessary, other stakeholders can be invited to participate in delineation of boundaries. In delineating the boundaries of the community fishing area, accurate minutes must be taken that give the location of boundary posts, specifying coordinates and all relevant features.

The delineation of boundaries for the community fishing area is required in order to have a clear statement of the area to be managed. Ideally, the community fishing area boundaries will coincide with a precisely defined ecosystem; however, more realistically the community fishing area may first operate within more socially or politically determined jurisdictional boundaries. The challenge is how to develop the community fishing area at the appropriate scale that addresses political, social/cultural, and ecosystem needs for management. When possible, the boundaries should address interconnections in the area between (1) aquatic habitats and conditions; (2) the composition, abundance, and distribution of aquatic species and natural resources; and (3) human use patterns.

When the community fishing area boundaries are identified, maps of the area should be prepared and validated through consultation with the stakeholders. This will serve not only to validate the boundaries, but also to inform community fisheries members and others stakeholders about the community fishing area and to come to an agreement on the community fishing area.

Step 7: The community fishing area agreement

The community fisheries committee shall prepare an agreement through the following process (Chapter 7, Article 18):

- The community fisheries committee shall conduct widespread consultation with residents and stakeholders in their local area before submitting it to the community fisheries congress for ratification.
- The community fisheries committee shall inform the Fisheries Cantonment so that it can send a representative to inspect the actual physical area and fishing gears used by the community.
- The community fisheries committee shall make a request to the Fisheries Cantonment to sign the agreement, attaching various documents according to article 24 of the Sub-Decree on Community Fisheries Management, and prepare to sign with the Fisheries Cantonment Chief at a specified location and date.

The community fishing area agreement shall specify the following important points:

- Parties signing the agreement
- The roles, duties and responsibilities of each party
- Location and size of the fishing area
- Time period of management and use of the fishing area
- Conditions of amendment of the agreement
- Conditions of termination of the agreement
- Other relevant documents

Note: While the *Prakas* states that conditions for the management and use of the fishing area and conditions on the use of fishing gears should be included in the community fishing area agreement, these are better included in the management plan.

There are only two parties who must sign the agreement, namely the Fisheries Cantonment Chief and the community fisheries committee, and it must be signed by the local commune/sangkat chief as witness. After the agreement has been signed, each page of the agreement must be stamped with the seal of the Fisheries Cantonment. Copies of the agreement shall be kept at the community fisheries office, commune/sangkat office, Fisheries Cantonment, Provincial/Municipal Office, Central Fisheries Administration, and Ministry of Agriculture, Forestry, and Fisheries, and photocopies may be given to relevant institutions, each copy being stamped with the seal.

Step 8: Registration and recognition of the community fisheries

After the signing of the community fisheries agreement, the Fisheries Cantonment Chief must make a request to the Ministry of Agriculture, Forestry, and Fisheries, via the central-level Fisheries Administration in order to register the community fisheries and announce its recognition. (Chapter 8, Article 21)

The community fishing area agreement document must have attached:

- A 1/50,000 scale map showing the areas requested for establishment of a community fishing area with clear coordinates;
- A list of community fisheries members and community fisheries committee members;
- The by-laws and internal regulations of the community fisheries;
- A statement on the objectives of establishing the community fisheries and management of the fisheries resources, with commitment to manage the fisheries resources sustainably;
- Other relevant documents if necessary.

Step 9: Community fishing area management planning

The *Prakas* states “After signing the community fishing area agreement, the community fisheries committee shall develop a management plan for their community fishing area. (Chapter 9, Article 22) Limited guidance is provided as to the content of the plan and how to prepare the plan.

Section 3 below provides guidance on preparing the community fishing area management plan.

3 COMMUNITY FISHING AREA MANAGEMENT PLAN

Annex 4 of the *Prakas* provides a model community fishing area management plan for a three-year period. This is a generic model in which the community fisheries committee fills in blank spaces with local information. While useful, it does not provide specific guidance for development of the community fisheries management plan.

Central to the community fisheries process is a fisheries management plan which is developed, implemented, monitored, and reviewed in a multi-year cyclical process. The plan identifies fisheries goals, objectives, indicators, targets/limits, management strategies and measures, as well as the roles and responsibilities among the partners, community fisheries members and government.

While the fisheries management planning is led by the community fisheries committee, it is meant to be a highly participatory process engaging with community fisheries members and government, including women and the Commune Women and Children Focal Point, in all steps of planning. Technical assistance for the community fisheries committee in preparing the plan is available upon request from the Fisheries Administration.

The community fishing area management plan indicates:

- What is the goal and objective(s) to be achieved?
- What is the specific activity for achieving the objectives and ultimately the goal?
- What is the expected output (what will be produced or changed)?
- What is the timeframe (over what period will this strategy be implemented)?
- Who are the participants (whose cooperation is needed to effectively carry out this action)?
- Who is the lead person(s) or organization(s) (who is responsible for implementation)?
- What are the funding needs and sources?

A gender perspective in the community fishing area management plan may include, for example:

- Goals and objectives that address the needs of both men and women
- Investment for improving technology of fish processing needed by women
- Activities to improve women's participation in the CFC and Community Fisheries
- Training to promote gender equality in the fisheries and aquaculture for CFC and CFI

3.1 Whitefish and Blackfish

Species of fish inhabiting the tropical floodplain river systems such as the Mekong can be broadly categorized as *blackfish* or *whitefish*. *Blackfish* species typically possess adaptations for surviving extreme environmental conditions including low dissolved oxygen and high temperatures that may exist in lentic floodplain environments. They undertake limited migrations and may remain on the floodplain throughout the year. *Whitefish* species are restricted to well oxygenated rivers and streams. They may remain in the main channel throughout their life migrating only upstream and downstream to feed and spawn. Some species spawn in the main channel - their young drift onto inundated floodplains to take advantage of rich feeding opportunities, whilst others will migrate from the main channel onto the floodplain to spawn.

Management plans prepared and implemented by the CFI should focus upon the management of *blackfish* species that migrate only locally. For these species, participatory management plans applied at a local level may result in improved local fish stocks and thereby directly benefit the local community. Communities therefore have an incentive to manage these stocks.

Highly migratory *whitefish* species also need to be managed over their migratory range, but for these species their range may be an entire sub-catchment (sub-basin) of the Mekong, the entire length of the Mekong River, or a large proportion of it, and may cross two or more countries. In these cases, catchment-wide or 'trans-boundary' management plans will need to be formulated and implemented. Management planning at this level is best handled by government(s) with their national or regional perspectives and authority, and with access to departments responsible for other sectors such as water resources and energy.

However, responsibility for the *implementation* of catchment-wide or trans-boundary management plan for a species of *whitefish* may fall to the CFI (and commercial fisheries). For example, the government of Cambodia, or a trans-boundary management authority, may decide that it is necessary to prohibit fishing for the threatened Julien's barb (*Probarbus julieni*) during July each year to rebuild the stock to safe levels. In which case, the CFI would have to comply with such measures (rules), and ensure that their own management plan takes account of them. The site needs assessment and the issue identification undertaken in preparation for the formulation of the management plan should therefore aim to describe any catchment-wide or trans-boundary management rules that the CFI management plan should consider or take account of in its formulation and implementation.

3.2 Community Fisheries Area Management Plan

The following steps are undertaken to develop the community fisheries area management plan.

The process presented below is for an ecosystem approach to fisheries management plan which includes addressing ecological (e.g. fishing effects on habitats and ecosystem resilience, target and by-catch species); societal (e.g. related to livelihood options, health and safety, post-harvest and processing, and interactions with other sectors); and related to governance (e.g. institutional, consultation, and external drivers) issues. A gender perspective should be integrated into all of steps of developing the community fisheries area management plan. Separate meetings with women's group should be conducted to find out women's issues, needs and opportunities and include in the plan.

Awareness raising activities should be ongoing throughout the management planning process to ensure that all community members have the information and skills needed to actively participate in the plan.

Step 1: Identify and prioritize issues and goals

Step 1.1 Identify threats and issues – Undertake an initial evaluation of threats and issues associated with the fishery. Through an EAFM, the threats and issues are broadened to include **ecological well-being** (e.g. habitat protection and restoration, pollution reduction and waste management, fishery resources); **human well-being** (e.g. food security, sustainable livelihoods, rural infrastructure); and **governance** (e.g., participation, empowerment, institutions). Thus, the identification should cover not just fishery but community development, livelihood, food security, governance, economic, social, and ecological considerations. The broad range of threats and issues of concern to the community fisheries members. For example, under a more traditional fisheries management planning approach only fisheries threats and issues would be identified, while under an ecosystem approach to fisheries management planning approach, non-fishing (e.g., upland pollution) and human (e.g., community infrastructure) issues and threats are also identified.

Identifying threats and issues and finding solutions are best done during a meeting/workshop where all relevant community fisheries members are gathered. It is important to get input from as many people as possible. If fewer people are involved at this stage, this increases the chances of some issues

being missed and also reduces subsequent “ownership” of the process. The process can be made very interactive with a few basic media aids, drawing on paper and whiteboards, or using photographs or simple cartoons. Starting with each broad threat or issue, these are further divided into more specific issues that can be tackled through a management intervention of some sort. The use of component trees allows the threats or issues to be put into a structured framework for subsequent risk analysis and prioritization” (FAO 2009).

Step 1.2 Prioritize threats and issues – The process of identifying threats and issues is likely to result in a long list of potential threats and issues, but there is a practical limit to how many threats and issues can be dealt with by a fisheries management system. While it is possible to take a broad approach and address all together, it is often more realistic to prioritize the threats and issues and then proceed to address them under the separate three headings (ecological well-being, human well-being, and governance). Prioritization involves judging the severity and risk associated with each threat and issue. At the prioritization stage, each issue is given a score in relation to its relative effect on the community and aquatic ecosystems and ranked. (SPC 2010)

Step 1.3 Identify and prioritize needs – In addition to identifying and prioritizing threats and issues, needs of the community fisheries members should be identified and prioritized. The identification of needs should cover not just the fishery but community development, livelihood, food security, governance, economic, social, and ecological considerations. The broad range of needs of concern to the community fisheries members. This step is important because it will determine which actions the CFI will focus on, in response to the needs identified and prioritized here. All needs should be identified, while remaining realistic (focus on needs the CFI or the village can do something about). The list should be prioritized from most important and urgent to less important and urgent as these are needs the CFI and the CFC will have to address.

Step 1.4 Define the goals for the fisheries management plan – A goal, or set of goals, is prepared related to the prioritized threats, issues and needs identified. A goal is a general statement of the desired state towards which the stakeholders are working. A good goal meets the following criteria:

- Visionary: inspirational in outlining the desired state towards which the stakeholders are working.
- Relatively general: broadly defined to encompass all activities.
- Brief: simple and succinct so that all stakeholders can remember it.
- Measurable: defined so that changes can be accurately assessed.

Although in some instances there may be multiple goals, it is usually easier to have only one goal. An example of goals are:

- Fisheries and other living aquatic resources have been restored and are managed sustainably.
- Degraded, vulnerable and critical habitats are restored, conserved, and maintained.

Step 1.5 Consider constraints and opportunities to achieving goal(s) – Each goal is reviewed to identify constraints and opportunities to achieving it based on cost, political support, stakeholder support, institutional support, human capacity, time, and information/data needs.

Step 2: Develop the Plan

Step 2.1 Operational objectives – The objectives are developed based on the threats, issues and needs affecting the goals. If the specific threat, issue or need has been well identified, it should not be difficult to create an objective related to addressing it. This needs to state what will be achieved in a general sense, e.g. minimize the impact on dolphins.

When writing objectives it is helpful to make them ‘SMART’ (Hindson et al., 2005):

Specific – it is a clear objective

Measurable – you can measure some indicator to check if you have achieved it

Agreed – by the appropriate stakeholders

Realistic – within your timescale and resources

Time dependent – it includes a stated timescale for achievement

If, for example, the biological goal of the CFI was: “To rebuild (overexploited) local fish stocks to levels that maximize their sustainable yields”, then a SMART objective might be: “To increase the abundance and yield of blackfish species by at least 30 % from their current levels by 2020”.

An objective is a formal statement detailing the desired outcome of management. The community fisheries operational objectives will be related to the overall goal and will address the key issues identified and prioritized by community members. For example, if a high silt load in river waters was identified as a high-priority threat to habitats and fish stocks, an appropriate objective would be “to reduce silt in river waters.” In general, an objective should be achievable within available resources and within a defined timeframe. Objectives serve as the basis for determining the management actions required and deciding on ways of measuring progress towards achieving the objective.

Each priority threat, issue or need can have more than one objective associated with it, depending upon what is to be accomplished. There are trade-offs between having too many objectives and having too few. If objectives are getting too long and complex, divide them. A general rule is to have between one and three objectives for each priority threat or issue. There may be objectives addressing ecological well-being (e.g. habitat protection and restoration, pollution reduction and waste management, fishery resources); human well-being (e.g. food security, sustainable livelihoods, rural infrastructure); and governance (e.g., participation, empowerment, institutions).

Step 2.2 Indicators and benchmarks or reference points– The community fisheries members will also then need to decide on how to assess whether the objective is being achieved. This is done through setting indicators and benchmarks or reference points. Indicators and benchmarks or reference points are developed only after an objective has been agreed upon. An indicator tracks the key outcome identified in the objective and, when compared with an agreed-upon benchmark or reference point (often a target or a limit value or trend), provides a measure of how well management is performing. For an objective to develop alternative sources of income, for example, an appropriate indicator might be the number of new community enterprises. The benchmark might be a minimum of three new community enterprises by year 3 of the project.

Step 2.3 Management measures – Once objectives have been agreed upon, there remains the task of deciding what needs to be done. Management measures are the measures required to achieve an objective. In a situation where there are one or more management measures, they are referred to collectively as a ‘strategy’—a group of measures required to reduce threats or address issue. In fisheries management, for example, management measures can include technical measures such as placing restrictions on the type of fishing gear used and imposing closed seasons to protect spawning stocks. For each objective, it is useful to prepare a list of all possible management measures with particular attention given to their ease of application, likelihood of success, feasibility, and cost. Often, one management measure can be used to address several objectives (e.g., fisheries conservation zone). The sum of the combined management measures is called the management strategy.

The management strategy should seek to avoid, or minimize negative impacts on members of the community including ethnic groups. If, for some reason, the management strategy results in any access restriction, provisions described in the RPF should be applied.

For each management measure, it is important to develop a workplan to identify

- What is the expected output (what will be produced or changed)?
- What is the timeframe (over what period will this strategy be implemented)?

- Who are the participants (whose cooperation is needed to effectively carry out this measure)?
- Who is the lead person or organization (who is responsible for implementation)?
- What are the funding needs and sources?

The implementation of an ecosystem approach to fisheries management plan will involve the use of conventional fisheries management measures to address target species concerns; measures to maintain, restore, and conserve species and habitats so to preserve the structure and function of the ecosystem; as well as activities to link to additional management sectors, such as watershed management, disaster risk reduction, and climate change adaptation; and measures to address human concerns such as livelihoods.

The suite of EAFM management measures available include:

- (i) conventional fisheries management measures designed to sustain aquatic resources and conserve biodiversity, address target species concerns and technical actions to regulate fishing mortality (e.g. control gear type):
 - catch and effort controls:
 - input (effort) controls (e.g. limited entry, boat capacity limits, fishing location limits, intensity of operation, fishing time, gear restrictions, gear modifications)
 - output (catch) controls (e.g. Total Allowable Catch, quotas, escapement controls, size limits)
 - spatial controls (e.g. area closures, conservation zones, and no-take areas);
 - temporal controls (e.g. seasonal closures; protecting spawning aggregations; permanent closures)
 - bycatch and juvenile reduction devices
- (ii) measures to maintain, restore, and conserve the structure and function of the ecosystem include ecosystem manipulation (e.g. conservation zones; network of conservation zones/protected areas; no-take areas; habitat restoration, creation and enhancement and population manipulation, such as restocking, stock enhancement and culling; protection of endangered and protected species; fisheries *refugia*);
- (iii) measures that address human social/economic dimensions such as public education, human capacity development (e.g., fishery management skills), community and economic development, income diversification and livelihoods, consumers (certification and ecolabelling), reduced energy usage, short term subsidies, and vessel buyback.
- (iv) measures to address the governance issues such as right-scaling; right-sizing of fishing effort; and reduction of fishing conflicts through fisheries use zoning.
- (v) measures to address open access to the fishery such as rights-based management including limited entry or access rights (TURFs, fishing rights area, limited entry licenses, input rights (limit total amount of effort, such as time fished, vessel size, amount and type of gear), and output rights (right to catch a piece of the TAC, such as individual quotas and community quotas). The Individual Transferable Quota (ITQ) is probably the most well-known form of rights-based management.
- (vi) measures to address non-fishery issues such as integrated water resources management, spatial planning, fisheries use zoning, and integrated ecosystem-based management.

Management measures defined in National Fisheries Legislation

The national fisheries legislation of Cambodia defines a number of specific management measures which may be utilized in fisheries management.

The 2006 Fisheries Law states that using the following gears shall be absolutely prohibited:

- 1- Electrocuting devices, explosive stuff, or all kind of poisons.

- 2- All means of pumping, bailing, drying any part of fishery domain, which cause disaster to the fishery resources.
- 3- Brush park, Samras or other devices to attract fish and other aquatic animals.
- 4- Spear fishing gears, Chhbok, Sang, Snor with projected lamp.
- 5- Fixed net or all kind of boa nets.
- 6- Net or all kind of seine with mesh size of less than 1.5 centimeters in inland fishery domain.
- 7- All kind of net with mesh size bigger than 15 centimeters in inland fishery domain.
- 8- Pair trawler or encircling net with attractive illuminated lamp for fish concentration.
- 9- Fishing gears made of mosquito net in inland fisheries.
- 10- All kind of trawling in the freshwater, and mechanized push net (*Chhip Yun*).
- 11- All kind of bamboo fence with mesh size of less than 1.5 centimeters.
- 12- All kind of transversal string and any measure which make fish escape.
- 13- Dam with all kind of fishing gears.
- 14- All kind of modern fishing gears; newly invented fishing gears or fishing practices leading to the destruction of fish, fishery resources and fishery eco-system, or which are not listed in the proclamation of the Minister of Agriculture, Forestry and Fisheries.

Producing, buying, selling, transporting and storing any electrocuting devices, all type of mosquito net fishing gear, mechanized motor pushed nets, inland trawler that are used for fishing purpose shall be prohibited.

The following fishing shall be prohibited:

1. Middle-scale and industrial fishing during the closed season.
2. Industrial fishing in the open access area.
3. Fishing activities in the open access area by using all types of fishing gears and fishing barriers of more than 50 meters long or more than two third of the watercourse or other barriers that obstruct navigation passage.
4. Using fishing net, seines or metal strips of less than four centimeters of mesh size as a barrier or instead of bamboo fence.
5. Fishing by bag net or freshwater prawn Dai net in wrong location, defined for Dai fishing lot or freshwater prawn Dai net.

Step 2.4 Enforcement and compliance - Community fisheries management plans should describe an enforcement mechanism that specifies who is responsible, the means of enforcement, and the penalties for non-compliance. Some of these procedures may be stated in the Internal Rules of the CFI. Monitoring, control, and surveillance (MCS) programs should be developed to support compliance and enforcement.

Step 2.5 Finance – Sufficient, timely, and sustained financial resources to support the community fisheries management plan are critical to achieve long-term sustainability of food security, livelihoods, and conservation of aquatic ecosystems and biodiversity. Funds need to be available to support various on-going operations and facilities related to planning, implementation, coordination, monitoring, and enforcement, among others. The community fisheries must be designed from the start with thoughts and plans for sustainable financing.

Too much dependency on external sources alone will likely impact long-term sustainability. Several sources of financing may be required. Sustainable financing mechanisms should be considered and evaluated as an essential part of a community fisheries management plan, similar to a financing strategy within a business plan. The financing plan should be based on an evaluation of the costs of operations for activities in the fisheries management plan over both short- and long-term time horizons.

According to the Prakas, a CFI can raise revenue from any source and manage the funds themselves, as long as it is lawful income, such as contributions from community fisheries members, charitable donations, through a tax on catch and enforcement fines (Article 30). The community fisheries committee can open a bank account and manage community fisheries finances in a transparent and accountable manner (Article 20).

Depending upon the situation, and the authority provided by the government, several sources of sustainable financing may be available (Spergel and Moye, 2004):

- Government revenue allocations;
 - Direct allocations from government budget;
 - Government bonds and taxes earmarked for conservation;
 - Lottery revenues;
 - Wildlife stamps;
 - Debt relief.
- Grant and donations
 - Bilateral and multilateral donors;
 - Foundations;
 - Non-government organizations;
 - Private sector;
 - Trust funds.
- Tourism revenues
 - Fees (entry, boating, fishing);
 - Tourism-related operations of management authorities;
 - Hotel taxes;
 - Visitor fees and taxes;
 - Voluntary contributions by tourists and tourism operators;
 - Cost recovery mechanisms.
- Real estate and development rights
 - Purchases or donations of land and/or property;
 - Conservation easements;
 - Real estate tax surcharges for conservation;
 - Tradable development rights and wetland banking;
 - Conservation concessions.
- Fishing industry revenues
 - Fish catch and services levies/cost recovery mechanisms;
 - Eco-labelling and product certification;
 - Fishing access payments;
 - Recreational fishing license fees and excise taxes;
 - Aquaculture license fees and taxes;
 - Fines for illegal fishing.
- Dam and mining revenues
 - Royalties and fees for mining;
 - Right-of-way fees for infrastructure;
 - Hydroelectric power revenues;
 - Voluntary contributions by companies.
- For-profit investments linked to conservation
 - Private sector investments promoting conservation;
 - Biodiversity prospecting.
- Other sources
 - Loans;
 - Income derived from local enterprises such as handicrafts, aquatic products, visitor

- gifts (t-shirts);
- Income derived from savings clubs/microcredit.

Step 2.6 Monitoring and evaluation plan

Managing fisheries resources is a continuous, adaptive and participatory process comprised of a set of related tasks that must be carried out to achieve a desired set of objectives. Plans must be monitored if they are to be kept on track, and evaluated if there is to be learning from successes and failures. Evaluation consists of reviewing results of actions taken and assessing whether these actions have produced the desired outcomes – this helps to adapt and improve by learning.

Monitoring and evaluation are processes which assist in answering the questions: Are the activities working or not? And what actions are needed to make them work? Monitoring answers the question: How are we doing? Evaluation answers the question: How did we do? If the plan has measurable objectives and indicators to evaluate the plan, ongoing monitoring can provide information required to evaluate effectiveness and performance of the plan. The monitoring and evaluation plan is the outline of the steps to undertake to ensure that the program is on track.

The planning cycle includes the process of assessment, monitoring and evaluation. Effective plan assessment and evaluation involves several steps: (i) preliminary appraisal; (ii) baseline assessment; (iii) monitoring; and (iv) evaluation. Information for each of these steps is essential to maximize chances that the plan will be effective for the adaptive management process and to acquire lessons learned.

Data and information needs to monitor implementation of the plan are considered. Clarify where the data are to be found and who collects, analyses and uses the information.

A gender perspective is important to include in the monitoring and evaluation. Gender refers to the roles and relationships, behavior and value, personality traits and attitudes that society ascribes to men and women. 'Gender' therefore refers to understanding differences between men and women, while 'sex' refers to the *biological* differences between males and females. Gender roles vary widely within and across cultures, and can change over time. Gender refers not simply to women or men but also to the relationship between them. Men, women, boys and girls have different issues and needs and capacities. A monitoring and evaluation process that is gender responsive will provide more accurate information to enable reform processes to be designed and implemented to better meet the specific needs of men and women and girls and boys in the fisheries and aquaculture sector. Marginalized groups, such as ethnic minorities, women and indigenous people, shall be included in the assessment and monitoring and evaluation process to improve the accuracy and comprehensiveness of the data collected. The monitoring and evaluation process will use a gender checklist in fisheries and aquaculture ensuring that the application of gender integration in the project is on track.

Step 2.7 Communication Plan – Ensuring public awareness of the management plan, particularly the management measures and any other rules and regulations, is important to effect compliance and to avoid conflicts. The community fisheries management plan and all of the associated management actions must be clearly communicated to all community fisheries members, especially those who will be directly impacted by it.

A communication strategy should be prepared, including an audience analysis matrix identifying audiences and their characteristics, a strategy for how and where results will be delivered, a set of key messages, a timeline for release of key messages, and a strategy for adaptive changes to the communication strategy as feedback from and dialogue with the stakeholders is received.

Public awareness of the fisheries management plan should be raised at community ceremonies and meetings; by distributing summaries of the plan to the key stakeholders; by preparing village notice (sign) boards summarizing the key details of the plan; by using local media; and by distributing copies of the management plan to village authorities, PFIA, community fisheries office, commune/sangkat office, Fisheries Cantonment, and provincial/municipal office. Original copies of the management plan should be 'filed' in agreed locations for reference. Permanent signs should also be prepared and erected to demarcate protected areas and conservation areas.

Step 2.8 Finalize the EAFM plan – The community fisheries management plan can be prepared based on the outline below. The management plan must be written in the local language in non-technical terms although it may be translated into English for the information of others. It should be relatively short at no more than 15 pages in length.

Once a draft EAFM plan is prepared, it is presented to the members of the community fisheries for review and comment through consultative meetings with community fisheries members and other stakeholders. Feedback about the plan should be recorded, and the plan revised if necessary. Through this validation process the plan is finalized and approved.

After the management plan has been revised for the final time, it should be printed and submitted to the central level Fisheries Administration through the respective Fisheries Administration cantonment for review and approval.

The period of validity of the community fishing area management plan shall be equal to that of the community fishing area agreement. The community fishing area management plan shall be reviewed by the Fisheries Administration cantonment office every year, or earlier if necessary, in order to report to the central level Fisheries Administration.

Table 1 Example goals, objectives, and management standards and measures for an example CFI management plan.

Goal	Objectives	Indicators	Benchmarks	Management Measures
Sustainable use of aquatic fauna and protection of biodiversity and the natural environment.	Avoid/limit the capture of Protected species	% of protected species in the catch (by number and weight).	Target: 5 %	Ban on fishing in area X inhabited by Protected species. Prohibited capture of Protected species.
	Control the use of harmful or highly efficient (prohibited) gears.	% of the catch landed using prohibited gear types.	Target: 0 %	Prohibited use of: poisons; explosives; electrical devices; obstructing gears; dewatering.

EXAMPLE OUTLINE OF A COMMUNITY FISHING AREA MANAGEMENT PLAN:

A Community Fishing Area Management Plan should include 11 sections:

1. VISION

Broad vision for the future for the community fisheries

2. ASSESSMENT OF THREATS, ISSUES AND NEEDS

Identification of threats to the system and corresponding issues to be addressed

3. PRIORITIZATION OF THREATS, ISSUES AND NEEDS

Ranking of issues to be addressed, from the most to the least important/urgent

4. GOALS OF MANAGEMENT

Goals of where you want management to lead to, in relation to issues

5. OBJECTIVES, INDICATORS AND BENCHMARKS

Objectives, indicators and benchmarks for the ecosystem, for the fishery and for the people

6. MANAGEMENT ACTIONS

Agreed actions to meet all objectives within agreed time frame and resources

7. ENFORCEMENT and COMPLIANCE

Mechanisms that specifies who is responsible, the means of enforcement, and the penalties for non-compliance.

8. FINANCING

Identification of the major sources of funding and sustainable funding strategy

9. COMMUNICATION

Communication strategy for dialogue between members of the CFI

10. GENDER ACTION

Activities planned to promote women

11. MONITORING AND EVALUATION

Performance of the management

3.3 Community Fishing Area Management Plan Implementation

Once the community fishing area agreement and plan has been approved, the implementation of the plan should be started as soon as possible in order to capitalize on the goodwill and excitement of the community fisheries members. Implementation comprises the activities by which the plan is carried out. The implementation process will involve numerous decision-making points and a different process from the one used to develop the plan and the agreement. All the management actions in the plan must be implemented correctly and in a timely manner if the goals and objectives are to be effectively achieved.

The community fishing area management plan workplan (done annually) should clearly specify activities, timelines, and individuals or groups who will be responsible for each activity and for reporting on the progress being made to the stakeholders. The implementation of the ecosystem approach to fisheries (EAFM) within the plan will require an awareness of the combined biological and ecological uncertainty under EAFM and the need to improve knowledge about the interactions between the fishery, the fisher, and the ecosystem. Especially in data-poor situations, there will be a need to make increasing use of the precautionary approach and fisher's traditional knowledge and participatory approaches to data collection and analysis to overcome the constraint of insufficient knowledge and adaptive management.

Given the importance of high stakeholder participation and cross-sectoral coordination, the plan implementation should include specific measures and mechanisms to continue engaging all stakeholders throughout the management process, especially those who will be directly impacted by it. Since many of the problems (water pollution, destruction of fish habitat, climate change) facing fisheries management fall outside the direct control of community fisheries, the implementation of the plan will require community fisheries committee to reach out and coordinate and integrate themselves within broader processes of integrated water resources management and conservation management.

Guidance for equipping the CFi with the necessary infrastructure and equipment to implement the plan are provided in the Guidelines for CFi Demarcation, Infrastructure and Equipment for CFi.

3.3.1 Conflict Management

The *Prakas* states (chapter 11, Article 33) - “All disputes in the community fisheries shall be resolved as follows:

- The community fisheries committee must mediate and resolve disputes that occur within their own community fisheries
- In the event that the community fisheries committee cannot successfully resolve the dispute, the case must be sent to the Fisheries Administration to resolve at successive levels of hierarchy, with the participation of local authorities and relevant officials as necessary.
- In the event that the dispute still cannot be resolved, the community fisheries committee and Fisheries Administration must submit the case to the relevant provincial or municipal court to resolve according to the law.”

Developing conflict resolution mechanisms in early phases of community fisheries management planning will help to build trust and avoid significant, time-consuming, costly conflicts throughout the process and after deployment of the plan. Community fisheries that include conflict management mechanisms tend to have far more success in achieving management objectives - ecological and social goals - than those without conflict management mechanisms.

Conflicts over fisheries and aquatic resources have many dimensions including, but not limited to, power, technology, and space. Conflicts can take place at a variety of levels, from within the household to the community and province. The intensity of conflicts may vary from confusion and frustration over the directions fisheries management is taking, to violent clashes between groups over resource ownership rights and responsibilities. Conflict may result from power differences between individuals or groups or through actions that threaten livelihoods.

Conflict management is about helping people in conflict develop an effective process for dealing with their differences. The problem lies in how conflict is managed. The generally accepted approach to conflict management recognizes that the parties in a dispute have different and frequently opposing views about the proper solution to a problem, but acknowledges that each group’s views, from the group’s perspective, may be both rational and legitimate. Thus, the goal of people working in conflict management is not to avoid conflict, but to develop the skills that can help people express their differences and solve their problems in a collaborative way.

3.3.2 Enforcement and Compliance

Enforcement is more than the presence of armed police arresting people, it involves the application of a broad range of approaches by different institutions and stakeholders to change or modify behavior. Enforcement interventions can be 'soft' preventive measures or 'hard' sanctions. Soft enforcement approaches promote voluntary compliance with the requirements of the law without going to the courts. Soft enforcement focuses on the social and cultural dynamics of compliance that can be used to: (a) sustain widespread compliance, (b) encourage voluntary compliance, and (iii) achieve general deterrence. Soft or positive approaches include:

- Social marketing;
- Social mobilization;
- Coastal resource management best practices;
- Legislation and regulation;

- Information management and dissemination;
- Education and outreach;
- Monitoring and evaluation.

Negative or 'hard' enforcement uses legal sanctions imposed by a court or regulatory authority for deterrence. Hard enforcement approaches have one objective, which is to identify, locate and suppress the violator using all possible instruments of law. Negative or hard approaches include:

- Continuous presence of law enforcers;
- Consistent activities to detect, apprehend and prosecute violators and impose appropriate sanctions;
- Sophisticated strategies developed to apprehend repeat violators;
- Negate all economic benefits from illegal activities.

3.3.3 Livelihoods

Sustainable livelihoods, resilient households and poverty reduction are critical elements for human well-being. The link between healthy, well-managed and productive fisheries and aquatic ecosystems and livelihoods is well established.

Adopting sustainable livelihoods thinking into community fisheries management requires considering fishers in the context of where they live and work – in households, communities and fishery-based economies – just as it deals with the fish in the context of where the fish live – the ecosystem. Fisheries management thus deals with the fishery as one of a portfolio of livelihood sources (if such alternatives exist) and as potentially linked, through livelihoods, to other economic sectors. (De Young et al. 2008).

A livelihood comprises the capabilities, assets (including both material and social resources) and activities required for a means of living. A livelihood is sustainable when it can cope with and recover from stresses and shocks and maintain its capabilities and assets both now and in the future, while not undermining the natural resource base (Chambers and Conway 1991).

The term “livelihoods” can have different meanings whether they are:

- “enhanced” livelihoods (focus on adding value to ongoing traditional or historical livelihood activities),
- “diversified or supplemental” livelihoods (additional livelihood activities to ongoing traditional or historical livelihood activities), or
- “alternative” livelihoods (completely changed livelihood from traditional or historical livelihood activities).

The development of sustainable livelihoods should focus on building the economic basis of livelihoods by giving people the skills that address the roots causes of vulnerability and build resilience to cope with the future. Social development (empowerment, organizations, education, training), economic development (job creation, basic public services, private sector investment, market access, microfinance), and ecological interventions (rehabilitating habitats) that address these fundamental issues must be integrated.

A household livelihood strategy should be taken. Livelihoods are almost always multiple and it is critical to understand the mix of livelihood options that a household and individual may select. Families tend to have a certain household income need. If a household livelihood strategy is taken, rather than just focusing on the fisher, it is possible to provide this broader range of livelihood options. A focus on all members of the family allows them to be trained in new livelihoods and better address the income and other needs of the household.

Livelihood projects can be classified as those that are resource-based (utilizing aquatic resources) and non-resource based (developed independent of aquatic resources). Projects may be income-generating projects that generate additional income for the household (such as pigs or aquaculture) or enterprises that are formed as businesses to generate more long-term jobs and benefits (such as handicraft enterprise or fish marketing). Entrepreneurship often requires the development of a broader skills and capability base for those involved. Any livelihood project, whether income generating or enterprise, should recognize cultural diversity, provide equal opportunity for both men and women, be economically viable with proper management, and environmentally friendly. A project feasibility study should be conducted before any livelihood is proposed. A project feasibility study is a thorough and systematic analysis of all factors (market, technical, financial, socio-economic and management) that affect the possibility of success of the proposed activity.

The capacity to contribute to sustainable livelihoods initiatives may require close links with agencies specifically responsible for community and economic development. Such development can also increase the quality of life in rural coastal communities through delivery of basic services (for example, health and education) and infrastructure development (for example, water, roads and communication).

Further guidance for guidance for identifying and supporting sustainable livelihood diversification and priority rural infrastructure investments in the two project provinces is provided in the project document “Livelihood Enhancement Manual and Guidelines for Implementation of Small-scale Infrastructure”.

3.3.4 Networking

The linkages developed by the community fisheries members to entities outside the community are crucial for the long-term success of community fisheries. Networking establishes linkages that are important so that interests and concerns are taken into account by policy and legislative processes of government, to provide a source of technical assistance and knowledge, to achieve certain objectives, and for the sharing of experiences and strategies.

The linkages include those to:

- Other communities and projects with community fisheries;
- NGOs and business for technical assistance and information;
- Government agencies with which the community fisheries do not generally have contact (Ministry of Commerce or Health);
- Sources of power and influence such as business leaders, politicians and law enforcement.

ANNEXES

Annex A: Community Fisheries and Co-management

There has been a shift in the governance of fisheries to an approach that recognizes fishers’ participation, local stewardship, and shared decision-making in the management of fisheries.

Cooperative management or co-management can be defined as a partnership arrangement in which the community of fishers and government, with other stakeholders (boat owners, fish traders, boat builders, business people, etc.) and external agents (non-governmental organizations (NGOs),

academic and research institutions), share the responsibility and authority for the management of the fishery.

Through consultations and negotiations, the partners develop a formal agreement, such as the community fishing area agreement, on their respective roles, responsibilities and rights in management.

Co-management covers various partnership arrangements and degrees of power sharing and integration of local (informal, traditional, customary) and centralized government management systems.

Elements of co-management:

1. Participation – taking part in management
2. Empowerment - becoming stronger and more confident with knowledge
3. Partnership – agreement to cooperate to advance common interests
4. Cooperation and collaboration - working with someone to produce something
5. Sharing of power (responsibility and authority) - shared responsibility for decision-making
6. Equitable membership – fair and equal to all including women and indigenous groups
7. Clear objectives - thing aimed at or sought
8. Agreements - arrangement between parties on a course of action

Community fisheries in Cambodia, as defined by law, is fisheries co-management. The co-management of community fisheries is a partnership between Cambodian citizens and the government, represented by the Fisheries Administration.

The co-management partnership is also seen in the Community Fishing Area Agreement signed between the Fisheries Cantonment Chief and the community fisheries committee, with the local commune/sangkat chief signing as witness.

Table 2 Roles and responsibilities of the central and local management authorities and the CFI in community fisheries co-management as defined by the law, sub-decree and *prakas*. MAFF: Ministry of Agriculture, Forestry and Fisheries; FiA: Fisheries Administration; CFC: Community Fisheries Committee; CFI: Community Fisheries; NGO: non-governmental organization

Roles/Responsibilities	Co-manager/Stakeholder							
	MAFF	FiA	Fisheries Cantonment	Commune/Sangkat Council	Group of Founders	CFC	CFI members	NGO
Establishment of CFI								
Establish a founder group and request CFI establishment			X	X				
Awareness raising			X		X			X
CFI site needs assessment					X			
Dissemination and registration of CFI members					X			
Vision statement and preparation of CFI by-laws and internal rules					X		X	
Process of the initial founding congress of CFI to elect the CFC					X		X	
Delineation of boundaries		X				X	X	

Roles/Responsibilities	Co-manager/Stakeholder							
	MAFF	FiA	Fisheries Cantonment	Commune/Sangkat Council	Group of Founders	CFC	CFi members	NGO
and mapping of community fishing area								
Community Fishing Area Agreement			X			X	X	
Registration and recognition of the community fisheries	X	X	X			X	X	
Preparation of CFi Fishing Area Management Plan								
Development of CFi fishing area management plan		X				X		X
Communicate plan to CFi members						X		X
Finalize plan						X		X
Implementation of the CFi Fishing Area Management Plan								
Annual action plan/workplan						X		X
Monitoring and evaluation						X		X
Adaptive management						X		X

Annex B: Community Fisheries and an Ecosystem Approach to Fisheries

Existing fisheries management does not cover all threats and issues facing the fishery (such as habitat loss and equity) and can often fail. A broader and more inclusive approach was needed.

- An Ecosystem Approach to Fisheries Management (EAFM) is a holistic, integrated and participatory management approach that considers the major components in an ecosystem, and the social and economic benefits that can be derived through sustainable use.
- An ecosystem approach seeks a BALANCE between ecological well-being and human well-being through good governance for future generations
- EAFM provides a vision that is more than just fisheries – it includes a healthy environment and habitats and improved well-being of the people.
- EAFM looks at the bigger picture. It recognizes that fish and fisheries are part of a broader ecosystem that includes where fish live as well as the people who benefit from catching, trading and eating fish.

Good fisheries management through an EAFM includes:

- a balance between a healthy environment, human well-being and good governance
 - Healthy environment: good fish diversity, sustainable abundance, non-degraded habitats and healthy water
 - Human well-being: good living standards (income), food security, improved social connections and relationships, safety
 - Good governance: co-management, participation; legal rights; equity; planning and implementation mechanisms; compliance and enforcement
- An approach that considers the major components in an ecosystem, and the social and economic benefits that can be derived through sustainable use.

There are seven principles of EAFM:

1. Good governance – accountability, transparency, effectiveness, efficiency, rule of law in governing
2. Appropriate scale – spatial, temporal and governance for management
3. Increased participation – people involvement in decision-making through co-management
4. Multiple objectives – balancing intentions of different sectors involved with fisheries
5. Cooperation and collaboration – engagement across multiple sectors of government, economy and environment
6. Adaptive management - A systematic process for continually improving management policies and practices toward achieving articulated goals and objectives by learning from the outcomes of previously employed policies and practices.
7. Precautionary approach - Lack of information should not be used as reason for lack of action. Where there is uncertainty, management actions should be less risky

The *precautionary* and *adaptive* approach to management is recommended at all spatial levels of management for tropical river fisheries.

A *precautionary* approach basically means, “let’s be careful!” For example, the CFI may decide to limit the overall levels of fishing effort by restricting the number of bamboo cylinder traps that may be used to catch *blackfish* species on the floodplains. If, for example, the CFI believes that the fishery for these *blackfish* species could support 500 bamboo cylinder traps, a lower limit of 300 traps might be set instead “just in case”. As information about the fishery improves, and if it is found that fish stocks are also improving, it may be possible to allow more traps to be fished.

An *adaptive* approach to management monitors and evaluates the management strategy (the sum of all the management measures), compares it with previous strategies, or strategies employed by other communities, and thereby improves the strategy based upon learning.

Annex C: Safeguards Instruments

Project Resettlement Policy Framework

<http://documents.worldbank.org/curated/en/553021468017380654/pdf/RP16400REVISED00Box385236B00PUBLIC0.pdf>

Project Indigenous Peoples Planning Framework

<http://documents.worldbank.org/curated/en/338651468279842975/pdf/IPP4450P10480611IPDF1Cambodia1Final.pdf>

Project Environmental and Social Management Framework

<http://documents.worldbank.org/curated/en/127391468262771421/pdf/SFG1476-EA-P148647-ESMF-Box393253B-PUBLIC-Disclosed-11-10-2015.pdf>

ANNEX D: Documenting Consultation Meetings

Meeting #1

Cambodia Mekong III – Indigenous Free, Prior and Informed Consultation (FPIC) Documentation
When to do the FPIC: During Kick-off meeting, with a commune/village
What to document: Getting feedback on CFI management Plan
Who will participate: Community Members (men/women/ethnic groups)

<p>Before meeting: Send out information to community on what the process will be and make sure there will be someone who can translate if there are indigenous people present.</p> <p>Who will facilitate: Social Safeguards Consultant / Project Implementation Team</p> <p>Province: _____ District: _____ Commune: _____</p>		
<p>Step 1: Present the CFI Management Plan</p>		
<p>Step 2: Break into Sub-groups to discuss the plan</p>		
With Women	With Men	With Indigenous/Ethnic (if a minority in Village)
What is good about the plan	What is good about the plan	What is good about the plan
What should change	What should change	What should change
		confirm that the plan will not harm indigenous lands, culture, natural resources or livelihoods
<p>Step 3: In Plenary (men, women, indigenous People together)</p> <ul style="list-style-type: none"> - Agree what needs to change about the plan - Agree the date for the next meeting 		
<p>Step 4: Document each step of the process</p>		

Meeting #2

<p>MIWRM-III – Indigenous Broad Community Support Documentation</p>
<p>When to do the Broad Community Support Meeting: Two weeks after the initial consultation meeting</p> <p>What to document: The <u>agreement of community on the CFI</u></p> <p>Who will participate: <u>Community members</u> (women, men, ethnic, indigenous people)</p> <p>Before meeting: Send out information to community on what the process will be and make sure there will be someone who can translate if there are indigenous people present.</p> <p>Who will facilitate the meeting: Social Safeguards Consultant / Project Implementation Team</p> <p>Province: _____ District: _____ Commune: _____</p>
<p>Step 1: Present the updated CFI</p>

Step 2: <i>Community Member vote on CFI</i>		
<i>With Women</i>	<i>With Men</i>	<i>With Indigenous/Ethnic (if a minority in Village)</i>
<i>Discuss whether they agree</i>	<i>Discuss whether they agree</i>	<i>Discuss whether they agree</i>
Step 3 (in plenary): <i>Agree on the CFI – <u>70% support</u> with confirmation that it will not disproportionately harm indigenous, ethnic or women members of community</i>		

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.