FISHERIES CO-MANAGEMENT TRAINING MANUAL

n° 5: Developing a Community Fishing Area Management Plan

KINGDOM OF CAMBODIA

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n° 5: Developing a Community Fishing Area Management Plan

Prepared by the

Inland Fisheries Research and Development Institute

for the

Fisheries Administration

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1. INTRODUCTION

This training is for Community Fishery (CFi) members to prepare or update the Community Fishing Area Management Plan. We provide in the following sections:

- a detailed description of each step in preparing the management plan, and
- guidance on developing each section of the manual.

For communities already having a management plan, this will involve revisiting and revising several points of the plan.

This training will be conducted in several modules of 2 to 3 hours each.

Complements for trainers

The training will provide a detailed description of each step in preparing the management plan, as well as examples of outputs, and guidance on developing each output. This will involve revisiting and revising several steps detailed in the *Prakas* such as the vision and needs assessment.

Steps in the process include identifying and prioritizing issues and threats, goals, objective, indicators, management actions, enforcement and compliance plan, finance plan, communication plan, gender action plan, and monitoring and evaluation plan.

Due to the complexity of developing a management plan, this training is planned to be conducted in several modules of 2-3 hours each in the community.

2. PURPOSE OF THE COMMUNITY FISHING AREA MANAGEMENT PLAN

The *purpose of the plan* is to identify:
- fisheries management strategies and actions;
- the roles and responsibilities among Community Fishery members and government;

The plan should also cover:
- social issues (e.g. conflicts, health and safety, fish processing);
- ecological issues (e.g. impacts on habitats, on certain species or on juveniles);
- governance issues (e.g. consultation process, involvement of women, etc.).

Planning is led by the Community Fishery Committee but should be very participatory.
Technical assistance in preparing the plan is available upon request from the Fisheries Administration Cantonment.
Women should be involved in the plan development, and their perspective should be integrated everywhere possible.
The management plan should be written in Khmer in non-technical terms, and should be relatively short (around 15 pages in length).

Complements for trainers

The *Prakas* states "*After signing the community fishing area agreement, the Community Fishery Committee shall develop a Management Plan for their community fishing area*".
The points to be also covered are:
- social issues (e.g. poaching or access conflicts, alternative livelihood options, health and safety among CFi members, processing of fish by women, etc.)
- ecological issues (e.g. impact of fishing on habitats or on juvenile fish; catching too much fish; problems due to boat traffic, etc.);
- governance issues (e.g. consultation process, decision-making process, finance management, involvement of women and minorities, relationships with institutions, etc.).

A gender perspective (women's issues, needs and opportunities) should be integrated into all of steps of developing the Community Fishing Area Management Plan.

3.   FIVE STEPS UNDERPINNING THE MANAGEMENT PLAN

Five steps already completed during the establishment of the Community Fishery will feed the management plan. These five steps are:

- the needs assessment;
- awareness raising ("dissemination");
- the internal rules and by-laws;
- the delineation of boundaries and mapping;
- the Community Fishing Area Agreement.

9 Steps of CFi Establishment

Complements for trainers

Obtain a copy of the needs assessment conducted during the establishment of the CFi and the community fishing area boundaries and map. This can be discussed with the participants to refresh their knowledge.

Discuss with the participants any awareness raising activities that were conducted during the establishment of the CFi.

3.1.   Needs assessment

The *needs assessment* consists in identifying the main issues the CFi is exposed to, and what is required to better cope with them. The needs assessment should cover:
- main environmental issues (e.g. drought, flooding, etc.);
- socio-economic issues (e.g. competition for access to resources, labor availability, migrations in and out of the villages, etc.;
- legal and institutional issues in relation to fisheries (e.g. overlapping jurisdictions, ownership, right to control access, etc.) and priority needs in relation to these;
- main issues about fish resources (e.g. fish abundance, species composition, alien species) as well as about the fishery (poaching, permitted gears, etc.), and what is needed as a priority in this sector.

The needs assessment will be systematically developed in the management plan.
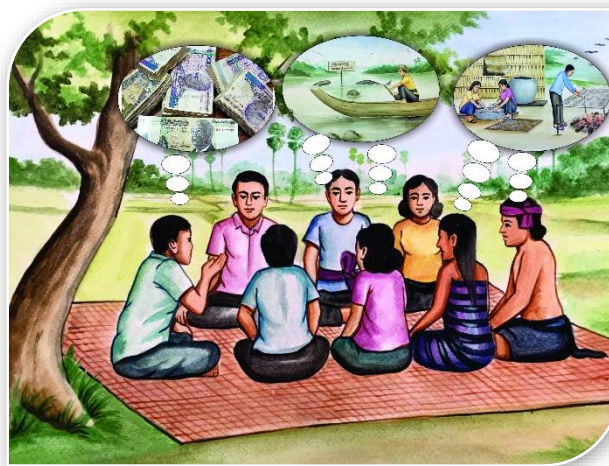
Complements for trainers

Needs assessment was already done as Step 2 during the establishment of the CFi. The management plan is a chance to update this part.

During this activity, both primary and secondary data are collected and analyzed. Information can be quantitative or qualitative, objective (e.g. village population), scientific (e.g. maps from Internet) or based on local knowledge (e.g. presence of migratory fish species in some seasons). The decision about the amount of detail required is made based on needs for decision-making and on available resources and time.

The emphasis here is on identifying root causes of problems and agreeing upon them before solutions are identified and actions are taken. Since funds and resources to address problems will probably be limited, it is important to focus efforts.

By involving community members in the needs assessment, the process itself becomes one of awareness, education, and commitment from which other activities grow.

3.2. Awareness raising

Awareness raising is needed throughout the fisheries management planning process.

Awareness allows empowering people to actively participate in the fisheries management process. Women and village minorities are encouraged to participate.

Aware CFi members can take an active role in the fishery management process such as holding meetings, obtaining good representation and managing conflicts better. Aware people will improve their understanding of fisheries resources and their management in an ecosystem context; they will be enabled to take greater control over resource, problems and needs.
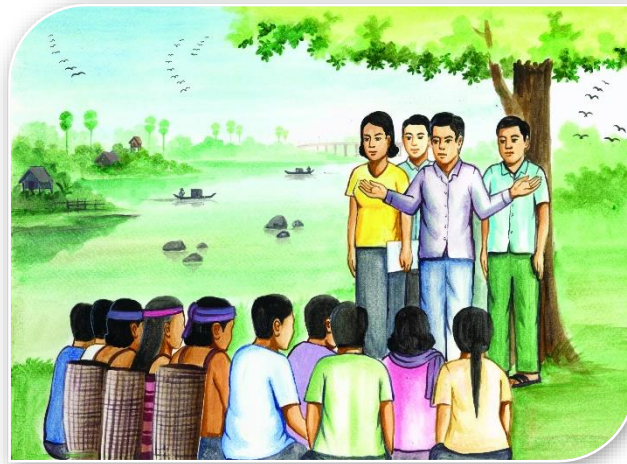
Complements for trainers

While many residents have an awareness and concern for fisheries and the environment, some may not; they may also find the process of developing a Community Fishing Area Management Plan complex. This may be especially true for ethnic and other minority groups.

There may therefore be a need to provide these people with more technical information on fisheries and ecosystems, and to develop their capacity to actively participate in the CFi fishing area management planning process.

3.3.   Internal rules and by-laws

Both the internal rules and the by-laws, developed during the establishment of the CFi, should be reviewed as they can provide guidance on the administrative procedures of the CFi and the rights and obligations of the members.
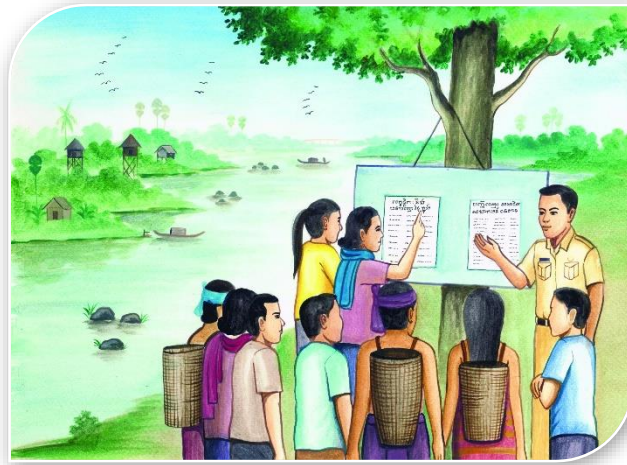
Complements for trainers
The **by-laws** are administrative procedures that specify how the Community Fishery is organized and should work (book keeping, elections, existence of a Community Fishery Committee, etc.)
The **internal rules** specify the rights and obligations of members, and organizational aspects such as meetings, etc.

3.4. Delineation and mapping of the community fishing area

The *mapping of the community fishing area* is required in order to have a clear statement of the area to be managed and where the rules of the Community Fishery apply. This is described in the Community Fishing Area Agreement.

When possible, the boundaries should address interconnections in the area between:
- aquatic habitats and environmental conditions;
- the composition, abundance and distribution of aquatic species and natural resources; and
- human use patterns.

Complements for trainers

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 community fishing area should be established at the appropriate scale that addresses political, social, cultural, and ecosystem needs for management.

3.5. Fishing Area Agreement

The Fishing Area Agreement can provide useful information for the management plan.
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 Fishery members and Community Fishery Committee members;
- the by-laws and internal rules of the Community Fishery; and
- a statement on the objectives of establishing the Community Fishery and management of the fishery resources.

Complements for trainers
The Community Fishing Area Agreement is an agreement by FiA to hand over management jurisdiction of fishing grounds to the CFi and for sustainable management for a three-year period. It also includes details of the fishing area, and describes the duties of the provincial Fisheries Administration Cantonment to support the CFi, and procedures for reporting non-compliance with rules and regulations.

4. OUTLINE OF A MANAGEMENT PLAN

A Community Fishing Area Management Plan should include 11 sections:

1. Vision
> Broad vision for the future for the Community Fishery

2. Assessment of threats, issues and needs
> Identification of threats to the system and corresponding issues to be addressed

3. Prioritization of threats and issues
> 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 measures
> 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 fisheries management
> Identification of the major sources of funding and sustainable funding strategy

9. Communications
> 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

Complements for trainers

This is a proposed outline. It provides guidance on the information that should be included in a management plan.

4.1. Section 1: Vision

The Community Fishing Area Management Plan should include a section (Section 1) about the *vision* of the CFi.

The **vision statement** is a sentence describing briefly the desirable overall situation to be achieved (whether it is fully feasible or not).

For example:

> *"By 2030, the fisheries of our community are ecologically healthy and deliver equitable benefits to our people through collaborative, safe, and legal fisheries management"*

What is your vision for your CFi?

The vision should come together with awareness about goals, objectives and actions and about the benefits derived from having a management plan. There may be a need to share within the village more technical information on fisheries and ecosystems, in particular with ethnic and other minority groups. This helps develop all people's capacity to actively participate in the CFi fisheries management, making the CFi more effective. Women in particular are encouraged to participate.
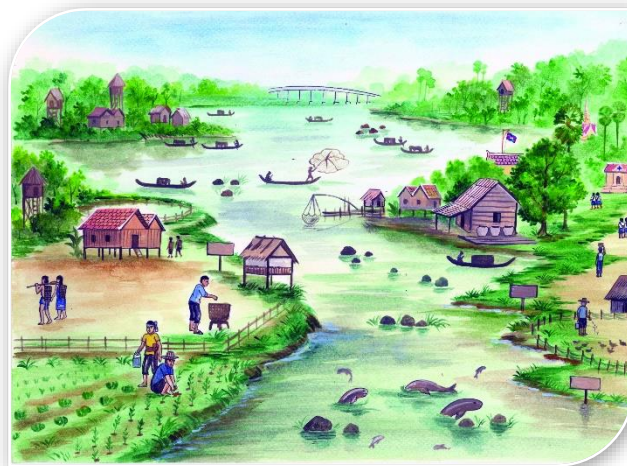
Complements for trainers

The vision must describe clearly what members want the CFi to look like in the future or the results they want to achieve through the CFi.

Examples:

To sustain sufficient fish catch in the next 20 years for each family of the CFi.

or

To be a recognized Community Fishery serving as an example for the development of other CFi in Cambodia.

Raising awareness about the vision is important: sharing information inside and outside the CFi, in particular with women and minority people, will enable people to begin to take greater control over resource, economic, and social problems. This will increase the whole village's awareness and understanding of fisheries resources, and their management in an ecosystem context.

4.2. Section 2: Assessment of threats and issues

The Community Fishing Area Management Plan should include a section (Section 2) about *assessment of threats and issues*.

In this section of the management plan, you need to identify threats:
- threats to ecological well-being (e.g. habitat reduction or destruction, pollution);
- threats to human well-being (e.g. threats to food security, to sustainable livelihoods);
- threats to governance (e.g. limited participation, lack of empowerment).

Thus, the identification should cover not just fisheries but also community development, livelihood, food security, infrastructure, governance, economic, social, and ecological considerations.

In relation to threats, you need to identify *issues* the CFi must deal with. Just consider a list of issues at this stage:
- ecological issues (about the habitat or about fish)
- social issues (i.e. issues faced by CFi members in relation to the fishery)
- governance issues (what need to be improved in social structures and processes)

Some examples are provided below.

Complements for trainers

The emphasis here is on identifying root causes of problems and agreeing upon them before solutions are identified and actions are taken.

The CFi members should identify the *broad range* of major threats of concern to them. For example, in addition to fisheries specific threats and issues, non-fishing (e.g. upland pollution) and human threats (e.g. new settlements) should also be identified.

Identifying threats and issues and finding solutions are best done during a meeting/workshop where all relevant Community Fishery 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. Each broad threat or issue is 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.

4.3. Section 3: Prioritization of issues and needs

4.3.1. Prioritization of issues

The Community Fishing Area Management Plan should include a section (Section 3) about *prioritization of threats and issues.*

Needs of the CFi in relation to threats need to be prioritized, from the most critical one down to least important ones. Prioritization involves judging:

- the risk of a threat or issue (likelihood);
- the severity of that threat if it happens (impact);
- the degree of control of the CFi over that threat or issue (action possible).

For each case, the risk or issue is given a score from 0 to 5 (0 = low probability, limited consequence, no control; 5 = high probability, high consequence, good control).
High-priority issues are those with a high likelihood of occurrence, a high impact, and for which the CFi has some degree of control. Some examples are given below.

Example:

	Likelihood	Impact	Action possible	SUM
The village is too isolated for trade	4	4	1	9
Women have no time for involvement	3	3	3	9
People are moving away to cities	2	2	1	5
Ponds are pumped dry in dry season	5	4	4	13
No incentive to manage the resource	5	5	3	13
No money for patrolling	5	3	4	12
The CFi cannot fine poachers	5	3	2	10

The darker colors indicate the priority issues.

Complements for trainers

There is a practical limit to how many threats and issues can be dealt with by a fishery management system. Since funds and resources to address problems will probably be limited, it is important to focus efforts.

While it is possible to take a broad approach and address all issues together, it is often more realistic to prioritize the issues and then proceed to address issues under three headings (ecological well-being, social well-being, and governance).

Another way to express the prioritization is to ask the following questions about a given risk, issue or problem:

- How likely is it (likelihood)?
- What would be the consequences of it going wrong (consequence)?
- Can we do something to reduce the problem (action)?

4.3.2. Prioritization of needs

Having identified the main issues and prioritized these issues, it is now possible to identify the actions needed in response to these needs, and then organize actions from the most needed to the less necessary or urgent.
This will serve as a basis for planning and management activities.

Again, this identification and prioritization will be done for three categories:

- Needs and priorities *in relation to ecological issues*
- Needs and priorities *in relation to social issues*
- Needs *in relation to governance issues*
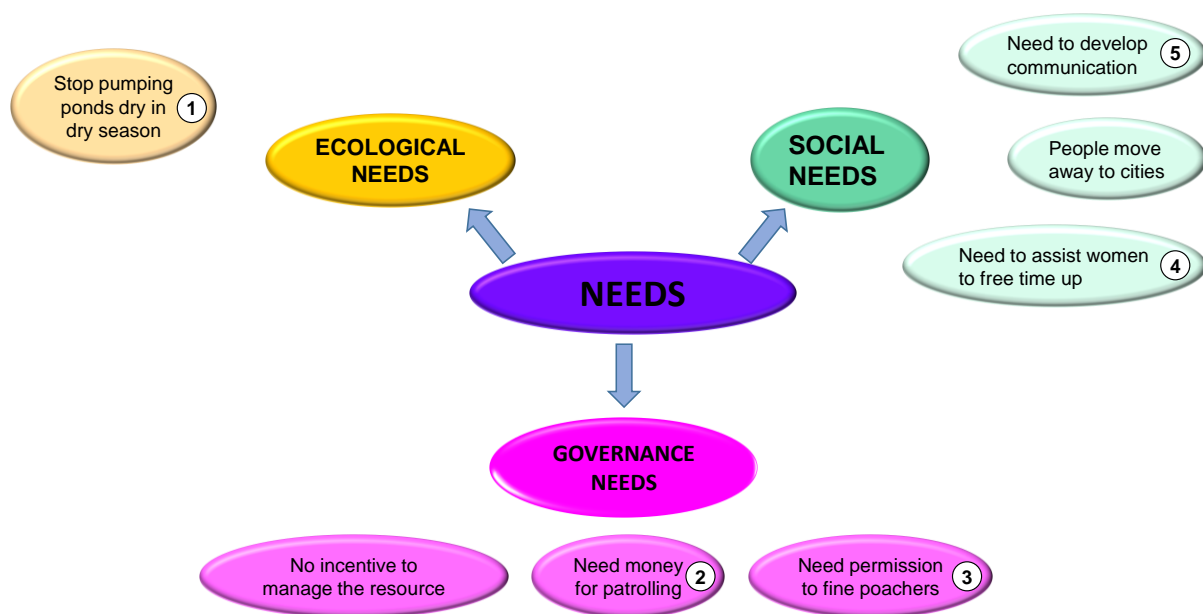
Complements for trainers
The identification of needs in the CFi can actually be split between i) *what is needed* and ii) *what the CFi needs to do* to address the need previously identified.

By involving community members in the needs assessment, the process itself becomes one of awareness, education, and commitment from which other activities grow.

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4.4.   Section 4: Goals of management

The Community Fishing Area Management Plan should include a section (Section 4) about the *goals of management*.

A **goal** is a general statement of the overall target towards which the CFi is working (what it can realistically achieve by taking action).
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;
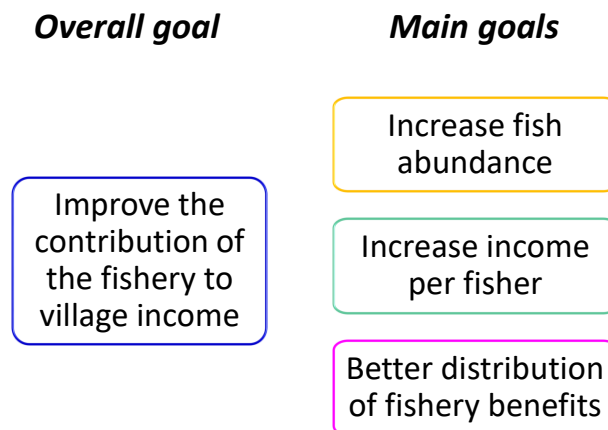• *brief:* simple and succinct so that all stakeholders can remember it;
• *measurable*: defined so that changes can be accurately assessed.

Example of possible goals:
- Fisheries and other living aquatic resources have been restored and are managed sustainably.
- Degraded, vulnerable and critical habitats are restored and maintained.

Overall goal   *Main goals*

Increase fish
abundance

Improve the
contribution of
the fishery to
village income

Increase income
per fisher

Better distribution
of fishery benefits

Complements for trainers

Each goal proposed must be discussed in relation to constraints and opportunities to achieving it, based on requirements, cost, support available (e.g. institutional support), human capacity and time required.

The goal is more focused than the Vision, as it integrates limitations and constraints (the vision is the dream, the goal is the objective of action in actual conditions)

Summary of the terms used in the management plan:
Vision → Goal(s) → Objectives → Indicators
> **Vision**: the desirable overall situation to be achieved (whether it is fully feasible or not).
> **Goal**: given the vision, the overall target towards which the CFi is working (what it can realistically achieve by taking action).
> **Objectives**: in relation to the overall goal, the targets to be reached or achieved for each issue identified.
> **Indicators**: for each objective, how progress can be measured.

4.5. Section 5: Objectives and indicators

4.5.1. Objectives

The Community Fishing Area Management Plan should include a section (section 5) about *objectives and indicators*.

An **objective** is a situation to be reached for each issue identified.
> *e.g. No impact of fishing on dolphins.*

An objective should be achievable within available resources and within a defined timeframe. There should be at least one objective for each issue identified, but there can also be more than one objective per issue, depending upon what is to be accomplished.

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).

Objectives should be "SMART":
> **S**pecific – a clear objective
> **M**easurable – you can measure some indicator to check if you have achieved it
> **A**greed – by the appropriate stakeholders
> **R**ealistic – within your timescale and resources
> **T**ime-dependent – it includes a stated timescale for achievement

If, for example, the biological goal of the CFi is:
> *"To rebuild the local fish stock"*

then a SMART objective might be:
> *"To increase by 2020 the abundance and yield of blackfish species by at least 30 % from their 2018 levels".*

A general rule is to have between one and three objectives for each priority threat or issue.

Complements for trainers

An objective is a formal statement detailing the desired outcome of management. The objectives of the CFi 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."

There are trade-offs between having too many objectives and having too few. If objectives are getting too long and complex, divide them.

4.5.2. Indicators

An **indicator** identifies how progress can be measured and provides a measure of how well management is performing.

Thus, defining indicators consists in tracking the performance of management in relation to objectives.

Summary: Vision → Goal(s) → Objectives → Indicators

Vision: the desirable overall situation to be achieved.
Goal: given the vision, the overall target towards which the CFi is working.
Objectives: in relation to the overall goal, the targets to be reached for each issue identified
Indicators: for each objective, how progress can be measured.

It is the identification of objectives, indicators and benchmarks that will translate into management measures, as detailed below.

Vision
→ Goal(s)
→ Objective 1
→ Indicator 1
→ Objective 2
→ Indicator 2
→ Objective 3
→ Indicator 3

Examples:
Vision: "*By 2030, the local fishery is sustainable and delivers equitable benefits*"
Goal: → "*Aquatic habitats are protected; fish catch is controlled and benefits are fairly shared*"
→ Objective 1: "*The current degradation of habitats is stopped*"
→ Indicator 1a: *by 2020, 4 of the 6 permanent ponds of the CFi will not be pumped dry in dry season*
→ Indicator 1b: *by 2020, there will be no more cases of poison fishing*
→ Objective 2: *"Fish extraction is under control"*
→ Indicator 2a: *by 2020, poaching will have been reduced by 80% compared to 2018*
→ Indicator 2b: *by 2020, the total fish harvest by CFi members will be the same as in 2018*
→ Objective 3: *"Benefits from the fishery are fairly shared within the CFi"*
→ Indicator 3: *By 2010, no more than 10% of the CFi members will complain that benefit sharing is unfair*

4.6. Section 6: Management measures

4.6.1. Fishing management measures

The Community Fishing Area Management Plan should include a section (Section 6) about *management measures*.

Management measures are the actions or activities required to achieve a given objective.

Management measures in fishery management may include:
- Catch controls
    - Quotas (e.g. each fisher can only catch 20 kg of fish per week)
    - Restrictions over fish size (minimum size for catch, in relation to size at maturity)
- Effort controls
    - limited number of fishers
    - limited number of boats or limited size of boats
    - limited gear quantity or gear size
- Measures to regulate fishing mortality
    - gear bans (e.g. poisoning or electrofishing are forbidden)
    - restrictions on gear or fishing methods (e.g. no nets fully blocking rivers)
- Spatial controls
    - area closures (e.g. no fishing in pagoda ponds)
    - area restrictions (e.g. no fishing in breeding sites at the time of breeding)
- Temporal controls
    - seasonal closures (e.g. no fishing from February to May);
    - time restrictions (e.g. no fishing in the morning, no fishing during breeding and spawning)
- Use rights or rights-based management measures
    - territorial use rights, locally managed area, access rights, input rights, catch rights

Management measures are not restricted to fishing activities; they should also cover ecological aspects, social aspects, and governance aspects.

Other management measures may include:
- Ecosystem management
  - protected areas or refuges (no fishing permitted)
  - habitat improvement (e.g. by concentrating water hyacinths as fish shelters, by digging small canals accessible to fish between rivers and rice fields, by digging ditches for fish in rice fields)
  - habitat restoration (e.g. by replanting vegetation in ponds, by not cutting vegetation or collecting algae any more in some fish breeding areas, by securing a certain water level in ponds in the dry season)
  - population enhancement (e.g. stocking reservoirs with fish, restocking some ponds with breeders from the wild)
  - protection of endangered species (e.g. releasing endangered species such Mekongina -*trey pa se ee*- or seven-line barb - *trey trasak*- when caught)
- Social measures (focused on social issues)
  - Livelihood diversification (to reduce the pressure on fish; e.g. ecotourism, aquaculture)
  - Infrastructure development (e.g. creation of a market for local fish trade)
  - Public education and human capacity development (also to promote the way out of fisheries)
  - Promotion of specific activities benefiting women
  - Integration of activities benefiting minorities in the village
- Measures linked to sectors other than the fishery sector
  - Water management
  - Agriculture management (e.g. limited use of pesticides)
  - Forest management (e.g. conservation of trees in breeding areas)
  - Land management (e.g. floodplain vegetation management; limitation of sedimentation in ponds)
  - Climate change adaptation (to avoid exclusive dependence upon fisheries)
- Governance measures
  - Better collaboration with the Fisheries Administration
  - Better integration with development NGOs
  - Systematic learning from successful and unsuccessful initiatives in other CFi

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 measure is to restrict access to the fishery, safeguards need to be addressed to ensure fair and equal treatment to all members of the Community Fishery. Households that are members of the CFi, and that may be negatively impacted by the implementation of the management plan, should be prioritized to receive financial support from the project (sub-grants) to enhance alternative livelihoods.

Complements for trainers
Definition: ***conservation zones*** = ***protected areas*** = ***no-take areas*** = ***refuges*** = areas where fishing is forbidden

4.6.3. Organizing management measures

For each objective, prepare a list of all possible management actions considered.
The sum of the combined management measures is called the **management strategy**.

Example: Table of goals, objectives, indicators and management measures

Goal	Objectives	Indicators	Management measures
Sustainable use of fish resources and protection of species diversity	Control the use of destructive fishing gears.	0% of the yield caught using prohibited gear types.	Prohibited use of poisons; explosives; electrical devices; obstructing gears; dewatering.
	Limit the capture of protected species.	5% maximum of protected species in the catch (by number and weight).	1) Ban on fishing in area A inhabited by protected species 2) Release of protected species when caught

When defining a given management measure, give particular attention to:
- feasibility (ease of application);
- likelihood of success;
- cost.

For each management measure, it is important to develop a workplan to identify:
- Detail of activities (practically, what do we do?)
- What is the timeframe (over what period will this strategy be implemented)?
- Who is the lead person or organization (who is responsible for implementation)?
- Who are the participants (whose cooperation is needed to effectively carry out this measure)?

Example: Table of management measures, detailed activities, time frame and who does what

Management measures	Detail of activities	Time frame	Leader	Participants
Prohibited use of poisons, of explosives, of electrical devices, of obstructing gears and of dewatering.	Forbid selling poison and electrofishing gear at the market. Monitor situation at least once a week.	1 year	Mr or Mrs X	Mr or Mrs A Mr or Mrs B Mr or Mrs C
1) Ban on fishing in area A inhabited by protected species	Identify areas to be banned. Demarcate banned areas. Monitor situation at least once a week.	2 years	Mr or Mrs Y	Mr or Mrs A Mr or Mrs D Mr or Mrs E
2) Release protected species when caught	Monitor species sold at the market.	1 year	Mr or Mrs Z	Mr or Mrs B Mr or Mrs F Mr or Mrs G

4.7. Section 7: Enforcement and compliance

The Community Fishing Area Management Plan should include a section (Section 7) about *enforcement and compliance*.

Enforcement involves applying a broad range of approaches to change or modify behavior. Enforcement interventions can consist of "soft" preventive measures or "hard" sanctions.

Soft measures promote good compliance through:
- o special events;
- o advocacy campaigns;
- o workshops, public meetings;
- o study tours, community exchange visits;
- o school programs, street theatre;
- o citizen watchdog groups.

Hard enforcement uses sanctions, and includes:
- o presence of law enforcers such as patrols;
- o activities to detect, apprehend and prosecute violators and
- o imposing legal sanctions.

The *enforcement* section of the management plan should describe an enforcement mechanism that specifies who is responsible, the means of enforcement, and the penalties for non-compliance.

Complements for trainers

Soft enforcement approaches promote voluntary compliance with the requirements. It focuses on sustaining existing compliance, encouraging voluntary compliance, and achieving general deterrence. Hard enforcement should be done within the strict limits of the law, without leading to the CFi implementing a system of fines or punishments that is not recognized by the law and by authorities.

The internal rules may contain guidance on reporting and sanctions for non-compliance. The management plan should complement the internal rules.
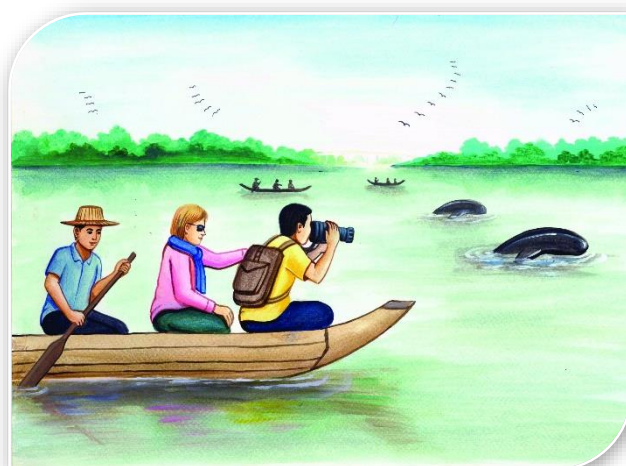
4.8. Section 8: Financing fisheries management

The Community Fishing Area Management Plan should include a *financing section* (Section 8). That section should be based on an evaluation of the costs of management actions.

The finance section should identify:

i) *major expenditure items* such as:
    o   infrastructure and equipment costs (e.g. patrol boat, surveillance and communication equipment, equipment to identify CFi boundaries);
    o   operating costs (gas, food, meeting supplies); and
    o   alternative livelihood activities costs.

ii) *sources of money and amount to pay* for these expenditures
    Several sources of financing may be required. Both internal and external sources of financing should be considered. Too much dependency on external sources alone will likely impact long-term sustainability.
    Possible sources of sustainable financing include:
    o   contributions from community fisheries members;
    o   charitable donations;
    o   assistance from the Royal Government, international organizations and non-governmental organizations;
    o   other lawful income, for example tourism revenue (entry fees, boating fees, recreational fishing license fee, etc.), income derived from local enterprises (handicrafts, aquatic products, local products etc.), income derived from savings clubs or other microcredit.

iii) the *expected timing* of these expenditures and income
    so that adequate cash flow can be available.

4.9. Section 9: Communications

The Community Fishing Area Management Plan should include a *communications* section (Section 9).

The Community Fishing Area Management Plan and all of the associated management actions must be clearly communicated to all Community Fishery members, especially those who will be directly impacted by it. Good communication of the management plan, of its actions and regulations is important to effect compliance and avoid conflicts.

The Communication section of the plan will include:
- a set of key messages;
- how and where results will be delivered;
- a timeline for release of key messages.

Public awareness of the 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 erecting permanent signs to demarcate protected areas.

A strategy for adaptive changes to the communication plan should also be prepared as feedback from stakeholders is received.

Copies of the full management plan should also be distributed to village authorities, Community Fishery office, commune/*Sangkat* office, Fisheries Cantonment, and provincial/municipal office.

4.10. Section 10: Gender action

The Community Fishing Area Management Plan should include a *gender* section (Section 10).

Fifty per cent of the village is composed of women and girls, and men and women have different issues, needs and capacities. The Community Fishing Area Management Plan must therefore integrate this reality and reflect gender aspects. Gender refers not simply to women or men but also to the relationship between them.

The gender action plan should include:

- clear targets about the inclusion of women in the Community fishing area management ("gender mainstreaming"). Considering quotas to ensure inclusion of women is an option.
- objectives, actions, performance indicators/targets and responsible person/group to address gender inclusion and facilitate women's involvement and/or ensure tangible benefits to women
- gender monitoring and evaluation indicators.

Example: Table of the gender action plan

Objectives	Actions	Indicators/ Targets	Responsible person/group
Ensure women inclusion in the Community Fishery Committee	Encourage women to participate in CFi meetings Encourage women CFi members to be candidates	Number of women who are CFC members and who participate in CFi meetings Target: at least 25% women	CFC chairman

Complements for trainers
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.

4.11. Section 11: Monitoring and evaluation

Plans must be monitored if they are to be kept on track, and evaluated if there is to be learning from successes and failures (adaptive management).

As the management plan has measurable objectives and indicators, *monitoring* can provide information required to evaluate effectiveness and performance of the management. *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 answers the question: *How are we doing?*
Evaluation answers the question: *How did we do?*

Monitoring and evaluation should include:

- a *perspective on gender* to enable reforms aimed at meeting the specific needs of women and girls;
- a *perspective on minorities and marginalized groups*, such as ethnic minorities or indigenous people when they are present in the village, in order to improve the accuracy of the data collected and enable reforms aimed at meeting the specific needs of minorities;
- a date at which the plan implementation is reviewed.

Complements for trainers

Monitoring and evaluation are processes which assist in answering the questions: "*Are the management measures, action and activities working or not? And what measures, actions and activities are needed to make them work?*"
Answering these questions helps to adapt and improve by learning.
Monitoring and evaluation require information to assess change.

5. CONCLUSION

The Community Fishing Area Management Plan can be prepared based on the outline provided in Section 4. The content should be detailed as exposed in the training, but should be concise (i.e. about 15 pages in length).

Once a draft plan is prepared, it is presented to the members of the Community Fishery for review and comments. Feedback about the plan should be recorded, and the plan revised if necessary. It is through this validation process that the plan is finalized and approved.

After the management plan has been revised and finalized, it should be printed and submitted to the central level Fisheries Administration trough the province Cantonment for review and approval.

In case of modification the Community Fishing Area Management Plan shall be reviewed by the Fisheries Administration Cantonment office every year, in order to report to the central level Fisheries Administration.

The period of validity of the Community Fishing Area Management Plan shall be equal to that of the community fishing area agreement.

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.

Five training manuals on inland fisheries co-management

The present manual is part of a series of five training manuals on inland fisheries co-management in Cambodia. These manuals target villages willing to form a Community Fishery, Community Fisheries members, members of Community Fishery Committees and staff of Fisheries Administration Cantonments.

N° 1: *Establishing a new Community Fishery*
audience: villagers
N° 2: *Strengthening the Community Fishery*
audience: all members of a Community Fishery
N° 3: *Strengthening Community Fishery Committees*
audience: elected members of Community Fishery Committees
N° 4: *Strengthening Fisheries Administration Cantonments*
audience: Fisheries Administration staff
N° 5: *Developing a Community Fishing Area Management Plan*
audience: all CFi members, in particular CFC members

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