
Adaptive community fisheries management in Cambodia what indicators?

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Management of River and Reservoir Fisheries in the Mekong Basin, Cambodia Sub-Component

ABSTRACT

There are more than 400 Community Fisheries now established in Cambodia. Among those around 10% are supported by the Mekong River Commissions (MRC), Management of River and Reservoir Fisheries (MRRF) sub component; located in Kampong Cham, Kampong Chhnang, Kandal and Stung Treng province as well as Phnom Penh. Some MRRF Community Fisheries (CF) have been established since 2001.

In the process of protecting and conserving fisheries natural resources, for sustainable use and management, many lessons have been learnt and experience gained by CF committee members. Local authorities and CF facilitators on Community Fisheries management and development activities have also benefited greatly in new skill acquisition, experience and knowledge..

Among those lessons learned, the application indicators for CF adaptive management are the important elements. This paper outlines the application indicators adapted by Community Fisheries groups for management practices and how they have been applied in the target areas.

KEY WORDS: Community fisheries management, Cambodia, Kampong Cham, Kampong Chhnang, Kandal, Stung Treng, Phnom Penh

BACKGROUND

Over the last 40 years, Cambodia has seen many different types of Fisheries management from the original fishing lot system installed by the French, to no fishing lot management under the Pol Pot regime, to Solidarity groups, fishing lot auctions and sub-leasing to the current trend towards Community Fisheries.

This move towards wide scale Community Fisheries came about due to the Fisheries Management Policy Reform in October 2000 when the Royal government of Cambodia released more than 56% of fishing lots for community use. However, as far back as 1994 the AIT were establishing community fishing ponds in places such as Svay Reing and in 1995 the Food and Agricultural Organisation (FAO) started community management projects in flooded forests. In 1998 CAA and CEPA established deep pool co-management in Kratie and Stung Treng.

MRRF/MRC started working in this area in 1999 when they developed a co-managed reservoir project in Kandal and K. Cham provinces. This has now expanded to cover projects with released fishing lots in rivers and lakes in K. Chhnang, Phnom Penh and public fishing grounds in Stung Treng. This expansion now means that MRRF/MRC is currently supporting around 10% of the more than 400 community fisheries in Cambodia.

In the case of Adaptive Fisheries Management for the Application of Indicator, the demonstration site will be introduced. The reservoir co-management project has been implemented since 1999 with the MRRF/MRC providing support, funding and technology in 2 fresh-water provinces; Kandal and Kg Cham province. The initial project activities were focused only on reservoirs. After fisheries

reform in 2000, the target areas extended to the release of fishing lots in Kampong Chhnang and Phnom Penh, and the management of deep pool by CF in Stung Treng province.

The objective of this paper is to understand the lessons learnt from this MRRF/MRC project regarding co-management of fishery resources. Not just those lessons learnt by MRC/MRRF staff or Department of Fishery (DoF) counterparts, but also the lessons learnt by CF Committees, local authorities, and CF facilitators.

The key lesson of which, is the use of application indicators in CF adaptive management. This paper will show which indicators were used in this CF management project of the fisheries resources, and how they were applicable.

TARGET AREAS:

- From 1999-present: The management of reservoirs in lower Mekong Basin (3 reservoirs) in Kandal and Kampong Cham provinces.
- From 2001- present: The target area was extended to the release fishing lot No 18 in Kandal province.
- From 2003-present: The target areas were extended to release fishing lots No 13-15 in Kampong Chhnang and fishing lot No 1 in Phnom Penh and deep pool in Stung Treng province.

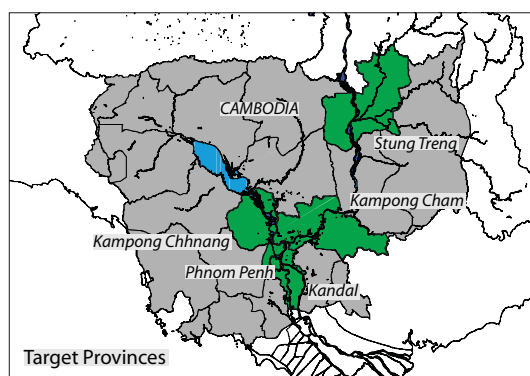


Figure 1. Location of target sites

TARGET STAKEHOLDERS

The key stakeholders identified in the MRRF are:

- Village water-body 'CF committee'
- Villagers/ fishers
- Local authorities (Chief of village/ commune)

- District fisheries officers / provincial fisheries officers/ central fisheries officers (DoF)
- Researchers/ experts (local NGO: CCD, CEPA, CAA; international NGO)

INSTITUTIONAL STRUCTURE IN MANAGEMENT ROLES AND RESPONSIBILITIES

Memberships and CF committees:

Khmer citizens of either sex who intend to become members of the community fisheries must comply with the following conditions:

- Have residency in one of the villages of the community fisheries;
- Hold Khmer citizenship;
- Be at least 18 years of age.
- One individual may only be a single community fisheries member in the community where he or she lives.

A Community Fisheries Committee leads each Community Fisheries. The CF committees were selected through confidential, free, and fair elections at village meetings, by an absolute majority of the members of the community fisheries who voted. The candidate who received the most votes became the Chief of the Community Fisheries Committee. The candidate who received the second most votes took on the position of Vice-Chief of the Community Fisheries Committee. The fisheries officers, local authorities or the commune/sangkat council were invited to observe or facilitate elections.

Management Roles and Responsibilities

Roles and responsibilities of community fisheries:

- Participate in managing and conserving fisheries resources in compliance with the by-laws and community fishing area management plan, which are in conformity with laws and other legal instruments related to fisheries;
- Respect instructions of the Department of Fisheries and Ministry of Agriculture, Forestry and Fisheries;
- Participate in establishing conservation areas within the community fishing area, protection and reforestation of inundated forest and mangrove forest, and restoration of shallow streams and lakes to improve ecosystems and fisheries environments;
- Guarantee all members of the community fisheries have equal rights in the sustainable use of fisheries resources as stipulated in the by-laws;

- Implement the by-laws of the community fisheries and formulate the community fishing area management plan;
- Enter into community fishing area agreements with the Department of Fisheries in order to manage the fisheries resources sustainable;
- Keep all documents related to the community fisheries.

THE PROCESS OF CO-MANAGEMENT IN THE MRRF PROJECT

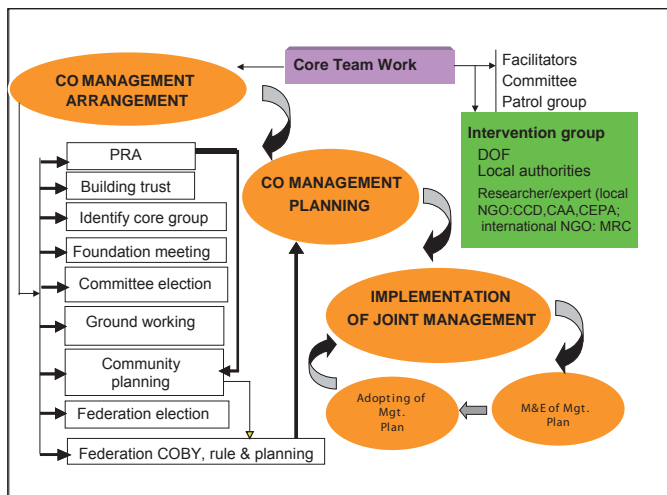


Figure 2. Co-management process

The above diagram shows the process of co-management used. On the left are the individual steps and tasks for establishing the CF, the right hand side shows the various stakeholders and groups involved in the co-management process and the diagonal represents the overall management process of establishing a co-managed community fishery.

INDICATORS USED FOR FISHERIES MANAGEMENT

Indicators used for fisheries management are split into different areas:

CF Activities Monitors

Regular events: Information/data on CF situation and activities are reported through regular monthly meetings by users, CF committee members and village chiefs, and written up in the CF note book at MRRF sites (not including CF in fishing lots 13-15, Kampong Chhnang province) through regular bi-monthly meetings. The monthly report is sent to Province Fisheries Office and CFDO/DoF through MRRF counterparts.

Irregular events: Matters/issues/events (such as illegal fishing activities) which happen un-regularly are recorded as minutes of these events by CF committee members/patrol group. The minutes should be accepted by local government, or village or commune chief, if they are available at the time of the event. The events must be immediately reported to local authorities and Provincial Fisheries Office or relative government agencies, with help provided by MRRF counterparts and CF facilitators.

The indicators used:

- Activities carried out from the CF Management Plan
- The situation of management
- Number of conflicts and illegal fishers
- The situation of patrol activities
- Number of interventions in stopping illegal fishing activities
- The situation of CF livelihood activities, e.g. cow/rice bank; women handicraft activities; small-scale business of selling fishing gears, mobile hatcheries etc. (expenditure and income recorded)

Why monitor?

To strengthen and follow up CF management and take action in subsequent CF monthly planning meetings, or immediate action, where necessary, by committee members, local authorities and provincial fisheries officers.

MONITORING OF MANAGEMENT IMPACTS (CATCH ASSESSMENT)

Catch assessment is conducted once a year, in the middle of the year, through focus group discussions with key informants (who do fishing regularly in reservoirs) by using questionnaires in all reservoir sites.

The indicators used:

- High and low season per gears
- Main gears used and mesh size
- Mean catch per gear and species by high and low season
- Number of fishers in high and low season by fishing gear
- Number of fishing days by fishing gear per week, per season and per fisher
- Species composition in the reservoir

- Number of motorized boats and non motorized boats by high and low season and by number of day

Why monitor?

- Results of fisheries co-management/CF management in the area;
- Data on fish catch, species and gear used in high and low seasons are used for monitoring activities and comparisons in the following year, to see how the situation of fish catch has changed in the area. This is important information for the users and CF members to see the results of their efforts and encourage them to participate in fisheries co-management.

CF MANAGEMENT PLAN REVIEW/EVALUATION

The CF management plan review is conducted once a year, at the end of the year, through focus group discussions with CF committee members, village chiefs, as well as some patrol members and CF members at each MRRF site. Strengths, weakness, opportunities and threats (SWOT) analysis is also used to see the strengths, weakness, opportunities, and threat of implementing CF management plans, and finding solutions for setting up management plans the following year.

The indicators used:

- Number and types of activities done and not done, and the reasons/causes
- Percentage achievement of each activity done
- Percentage of satisfaction and no satisfaction by each activity, and the reasons/causes
- Strengths, weakness, opportunities, and threats of CF management plan implementation and recommendations

MONITORING AND DATA NEEDS

Monitoring and data needs that have been addressed by CF committee members, CF members and local authorities while setting up the CF management plan review, are as follows:

- Monitoring of fish catch at river sites
- The effectiveness of CF management with regards to sustainability
- The effectiveness of CF regarding compliance with regulations
- Methods of patrolling and how to arrest and stop illegal fishing in an effective and sufficient manner
- Information and knowledge on community fisheries development to be self-reliant and financed
- Number of fish traders and fish prices in the area
- The appropriate gear used

- Ecological information in CF areas

Why monitor?

Results of CF management plan implementation are required to be reported to the provincial fisheries office and CFDO/DoF. Monitoring and data is also important to establish the CF management plan for the following year.

BENEFITS FROM ADAPTIVE MANAGEMENT, POSSIBILITIES AND CONSTRAINTS TO SCALE-UP TO NATIONAL LEVEL

Benefits

Awareness creation

- Stakeholders and local authorities more clearly understood the importance of participation in natural fisheries resources management in line with DoF/PFO officers, and the importance of management and conservation of natural resources.
- Stakeholders built up their confidence to speak out on the problems they were facing, how they thought these problems could be solved, and ask for assistance from DoF and PFO officers.
- High level of participation by women.
- Increased human capacity at grassroots level.

Fisheries management:

- A majority of CF members do not use illegal fishing gears and become active participants in patrolling activities.
- Limited access in place.
- Significant reduction of conflict.
- More fish in the reservoir and management target areas.
- High level of community participation.
- Significant decrease in illegal fishing.
- Increase in fish numbers and household income in some target areas with fingerling release program.
- Decentralisation of power and fishing rights to the local level.

Planning and Development for the CF

- While CF members have the capacity to plan and develop fishing communities, assistance is sought from DoF and PFO officers or NGOs working in the area.

- Plans manage natural resources and provide alternative job options for fishers.

Responsibility and Constraints to scale-up to a National Level

The main constraints on replicating to scale up to a national level are, funding for a nationwide project from a single source, and having enough trained and skilled fisheries officers to run it. Currently, the wide variety of projects undertaken by DoF are funded by a range of donor organisations, each with their own set of indicators and evaluation criteria.

CONCLUSIONS AND RECOMMENDATIONS

To conclude, there are some clear benefits to using adaptive management in fisheries co-management, the benefits to the fishers themselves are the most easy to see. Furthermore, with the continuing increase in participation by communities, the benefits from fisheries can be seen in other areas of work, part of this is due to member networking.

The application of indicators is a useful method, not only to monitor a project, but also to help in the management and planning process for the community fishery itself. Helping the community fisheries committee become more self reliant and sustainable in its workings and processes.

However, there are some serious constraints to scaling this up to a national level. It is recommended that all NGO's, donor organisations and government departments, adopt a national, common set of indicators in order to achieve successful CF management.

Constraints imposed by the limitations of staff qualifications and skills can be overcome through adequate funding. This would provide the ability to hire more qualified staff members and fund additional training for existing staff. Funding is the main constraint in scaling up to a national project; additional funding needs to be secured.

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