

Fisheries Reforms and Right-Based Fisheries: Insights From Community Fisheries Across Cambodia



2016

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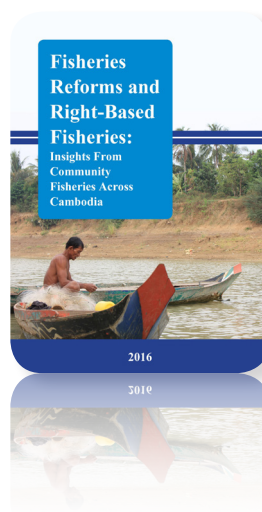
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Executive Summary

Fisheries reform in Cambodia has provided a larger space for the participation of communities dependent on small-scale fisheries in the use and management of their natural resources. The rights and responsibilities of Community Fisheries (CFi) are held in Cambodian law and other legal documents, such as the Sub-decree on Community Fisheries Management. However, widespread mismanagement leading up to such reforms is also reported to be the cause of new institutional uncertainties, challenges, and risks of conflict.

This report aims to determine whether rights-based incentive structures actually help improve fisheries management and governance. As such, the research compares CFi rights and responsibilities as defined in the Cambodian legal framework, with their actual implementation in local contexts.

Qualitative research methods, including focus group discussions (FGDs), key informant interviews (KIIs), and site observations were conducted at nine (9) inland and coastal CFis, with these classified into four groups based on their size and institutional dynamics.

The report argues that the rights-based incentives and regulatory structures for community fisheries activities in Cambodia are inadequate to improve the management of fisheries in all its dimensions (productivity, control of illegal activities, benefit sharing, etc.).

- First, CFi access is complex, due to the non-exclusionary nature of the CFis, misalignment between community fishing areas and actual fishing grounds, and unclear CFi boundaries. As a result, illegal fishing activities remain a major problem across CFis. The cancellation of commercial fishing lots is perceived as a positive outcome by fishermen because it has resulted in an expansion of community fisheries areas. However, our respondents also indicated that the opening of the fishing frontier has created space for opportunism, attracting new actors across fishing sectors (including commercial middle-scale fishers) and, in a context of management uncertainty, has resulted in an increase of illegal fishing activities.
- Second, the right to operate commercial community-based fisheries activities for income generation at the community-level is not granted by current Cambodian law. This omission limits a community's negotiating power in co-management deliberations, and represents a key bottleneck in the CFi system, undermining its longer term sustainability. This report identifies exceptional cases of larger and institutionally more dynamic CFis engaged in commercial community-based fisheries which, significantly, enables more effective management of the CFi, despite its 'marginal' legality.

- Third, there are no legal restrictions on the type and number of family-scale fishing gear, other than the regulation of net length and mesh size; the volume of fish catch is not itself restricted. However, the CFIs report concerns regarding the decline in individual fish catches due to an increase in numbers of fishers. This situation is an issue that CFI management, despite efforts to conserve spawning habitats, appears unable to address, and which diminishes the sense of local ownership of CFI management.
- Fourth, the rights of individual fishers to participate as co-management actors in CFI decision-making processes appear weak, as the state maintains strong control over the entire CFI process. For instance, with the exception of only two CFIs, all CFIs assessed have rights only to relay any dispute to FiA Cantonment and local authorities, request intervention, and wait for their arrival to work together on its resolution. The exceptions are 2 cases where an unofficial agreement was reached between FiA and CFI to allow the communities to temporarily arrest offenders before the arrival of FiA officers. This agreement does not comply with legally defined rights and responsibilities, yet it enables more effective fishery resources management.

Acronyms

CamCode	Cambodian Code of Conduct for Responsible Fisheries
CFI	Community Fisheries
CCRF	Code of Conduct for Responsible fishing
CFDO	Community Fishery Development Office
CPUE	Catch Per Unit Effort
EBFM	Ecosystem-Based Fisheries Management
FAO	Food and Agriculture Organization of the United Nations
FGDs	Focus Group Discussions
FiA	Fisheries Administration
GDP	Gross Domestic Product
ICSF	International Collective in Support Fishworkers
IFRel	Inland Fisheries Research and Development Institute
KIIs	Key Informant Interviews
LI	The Learning Institute
MAFF	Ministry of Agriculture, Forestry and Fisheries
NGOs	Non-Governmental Organizations
RBA	Rights-Based Approach
RGC	Royal Government of Cambodia
SEAFDEC	Southeast Asian Fisheries Development Centre
SSF	Securing Sustainable Small-scale Fisheries

Introduction

Fisheries reform in Cambodia has been an ongoing process since 2000, successively marked by the partial cancellation of commercial fishing lots in 2000/2001; establishment of the institutional arrangement known as Community Fisheries (CFi) and, ultimately, the cancellation of all fishing lots in 2012.

While increasing the areas available for CFi, as well as those designated for conservation, the reforms introduced an array of new institutional uncertainties, challenges and risks of conflict (Jones & Say, 2015; Kim, Mam, Oeur, So & Blake, 2013; Milne, 2013). The challenges are particularly acute for CFi management, which has become the central institution for fisheries management in Cambodia.

The project **'Strengthening Community Fisheries Management and Livelihoods Diversification in Cambodia'** in the regions of the Tonle Sap and Coastal Provinces⁽¹⁾, is an attempt to strengthen small-scale fishing activities in Cambodia. It posits manifold objectives: to strengthen the rights of CFi members; enhance the capacity of local youth groups and community fisheries organizations to support sustainable fisheries and habitat management, and improve recognition of the role of women in fisheries, and integrate gender perspective into the development of rural/coastal livelihoods and community fisheries and habitat management.

The research report examines the transformation of fisheries governance using a rights-based approach (RBA). We aim to assess the level of consistency between the legal framework definition of community fisheries rights and responsibilities, and the actual implementation of those rights by CFi groups in their local context. We also investigate whether and how operative fishing rights actually facilitate and improve fisheries management and governance. We aim to identify the circumstances, context and conditions under which these rights are successfully exercised and enforced, and whether this results in any recognizable improvement of fisheries and of local governance and management processes. Discussion of fishers' rights are contextualized through the themes of i) access boundaries, ii) productivity of resources, and iii) ownership of CFi institutional process. Where possible, we present examples of how locally derived institutions actually help to improve CFi management, but suggest that, more generally, there is insufficient operationalization of rights-based approaches and incentive structures for CFi to improve Cambodian freshwater and marine fisheries.

⁽¹⁾ The four years project is funded by Government of Sweden through Southeast Asian Fisher Development Center (SEAFDEC) and commenced in 2013. It is implemented by the Learning Institute.

Significance of Fisheries in Cambodia

Fisheries are at a crossroads in Cambodia. On one side, fisheries play a crucial role in the lives of Cambodians and the country's economic growth; environmental protection and conservation of biodiversity; good governance, and poverty alleviation (Fisheries Administration, 2011b). On the other side, the broader social value of fisheries is marginalized or discounted in key government policy-making in sectors of agriculture, energy and water.

Over the 10-year period spanning 2001 to 2011, fisheries production in Cambodia – including both subsistence and commercial fisheries, and the aquaculture sector – amounted overall to between 300,000 and 600,000 tons per year, comprising 79% freshwater fish, 14% marine and 7% from aquaculture. The trend in fish production has steadily increased during this past decade: while the inland fisheries sector saw a 29% increase, marine fisheries production doubled and, although its overall contribution remains relatively small, aquaculture production increased five-fold during the period. The inland fisheries sector contributes by far the largest share of fish supply in Cambodia, but is currently stagnant and may eventually show a production decline (Baran et al., 2014).

A recent study by the Inland Fisheries Research and Development Institute (IFReDI, 2013) found that the second largest food source for Cambodians (after rice) is aquatic resources, i.e. fish and other aquatic animals such as crabs, molluscs and frogs, at 63 kg per person annually, representing 76% of the population's total animal protein intake.

Fisheries production, in terms of inland and coastal fisheries harvesting, processing and trade, is estimated at approximately USD 300 million per year, a contribution of between 8% and 12% to Gross Domestic Product (GDP), and an overall gross value of USD 2 billion (Fisheries Administration, 2011b). IFReDI (2013) estimates that at USD1.6/kg, the total economic value of freshwater fish and aquatic products has reached 1 billion per year. However, such figures are contested, and other observers assert that the value of capture fish production is not well known, since there is no systematic assessment of the price of fish per kilogram, resulting in an undervaluation of the contribution of fisheries to GDP (Baran et al., 2014).

In terms of employment opportunities, it is estimated that the fisheries sector provides full-time, part-time and seasonal work to around 2 million of Cambodia's 14 million, with 10.5% of full-time workers and 34% of part time workers involved in fishing. Other research has established that the fisheries sector provides income and livelihoods to 46% of the total population, or about 6.7 million people, and represents over 10% of GDP (Johnstone et al., 2013).

Fisheries Reforms and Fishing Rights in Cambodia

The stated aim of the 2006 Fisheries Law is to implement both inland and coastal fisheries management based on a conservation perspective, in addition to promoting the livelihoods of local communities (RGC, 2006). It defines and regulates fishery practices in Cambodia on the basis of operational scale (small, medium and large-scale); corresponding types, length and size of fishing gears, and fishing season(s) and areas.

The management of fisheries resources in Cambodia is now largely devoted to small-scale fishermen, organized (or not) as CFis, as a result of the 'reform' process unfolding over the last 15 years. Two distinct phases can be seen to constitute this process, each characterised by an important landmark: the first by the 2000-2001 cancellation of approximately 56% of commercial fishing lot areas, and the second by the complete cancellation of the fishing lots in 2012. In the following section, we look at these two periods of reforms and examine their implications in terms of fishing rights.

First phase of reform

In early 2000, Cambodian fisheries were in an institutional crisis. The management of commercial fishing, introduced under the French protectorate (1863-1954) and reinstituted following the civil war, gave rise to a number of problems and conflicts that the government had difficulty addressing (Degen et al., 2000). Large scale aquatic resource concessions enabled elite stakeholders to strictly control access to lake resources, extract large aquatic resource rents and pay little in tax, without being subject to any truly effective upward accountability to the FiA (Jones & Say, 2015).

The RGC, under the direct order and supervision of Prime Minister Hun Sen, then decided to reduce the area of commercial fishing lots by 56%, or more than half a million hectares, and transferred the decommissioned area to small-scale local fishers who were subsequently organized into CFi, in a co-management arrangement with the FiA (Johnstone et al., 2013; Mom, 2009).

This reform entailed far more than the cancellation of fishing lots and establishment of CFi; it led to the creation of new state institutions, such as the Community Fisheries Development Office⁽²⁾ (CFDO), and a new legal framework, in the form of the 2006 Law on Fisheries and Community Fisheries Sub-decree, representing a more holistic approach to fisheries management (CFDO, 2004). The Law and sub-decree are currently the only accepted legal mechanisms for identifying rights and responsibilities in fishing activities in Cambodia, and the FiA of the Ministry of Agriculture, Forestry and Fisheries (MAFF)

⁽²⁾ On 21st February, 2001, the MAFF established a new unit within the Department of Fisheries, the Community Fisheries Development Office (CFDO) specifically tasked with supporting communities to manage the newly released fishing areas and encouraging more participatory management of fisheries countrywide (CFDO, 2004).

holds oversight responsibility for all aspects of fisheries management, including the implementation of any fisheries reform and development of corresponding legal framework; monitoring of fisheries management, and enforcement of the Fisheries Law.

Kurien et al. (2006) argued that reform of the fisheries sector in Cambodia should aim to allow more freedom for resource users to manage local resources, based on co-management practices involving the state and community-based fisheries groups in a process supported and mediated by a diversity of NGOs, civil society groups and donors. The establishment of CFi brought attention to both community-level rights and formal state rights and responsibilities, and as a co-management mechanism, has been an attempt towards more inclusive and effective small-scale fisheries management in Cambodia.

However, the institutional and managerial challenges that the reform had to address were immense, and the first outcomes were far from satisfactory. An early impact assessment on policy reform (CFDO, 2004) revealed that this reform resulted in providing more opportunities for fisherfolk to access fishery resources in a wider area, and even increase their income. However, it also allowed for more unregulated competition among fishers, ultimately controlled by elite fishers⁽³⁾ and some corrupt elements of local authority, such that the poor could not find effective ways to take full advantage of this new freedom of movement and access. The assessment argued that with over-exploitation due to an increase both in numbers of fishermen and in the use of illegal fishing gear, the catch per unit effort (CPUE) had declined and conflicts increased. This reform also confused the rights, roles, and responsibilities of fisheries-related stakeholders. Another assessment (Viner et al, 2006) further suggested that the performance and sustainability of co-management arrangements were constrained by a lack of clearly defined property rights, resource boundaries and access control, and a mismatch between resource scale and management initiatives.

A wide consensus emerged in the 2000s, suggesting the need for future co-management to establish flexible, long-term goals; clear and defined roles and management responsibilities for both resource users and state government, and viable paths for alternative livelihoods, allowing for exit from fishery and reduction of pressure on fishery resources.

Second phase of reform

Seeing that the first reform was not 'deep' enough to solve the long standing conflicts in Cambodian fisheries and accompanied by increased demands for access from communities, Prime Minister Hun Sen made the unilateral decision in 2007, in line with the government priority of assisting small-scale fishing livelihoods, to cancel the remaining fishing lots along the Tonle Sap and allocate them for public use and conservation (Kim, et al., 2013).

⁽³⁾ Elite fishers: the wealthy fisher who can afford larger and more sophisticated gear.

This second reform has produced significant, if some unintended, outcomes. With all fishing lots cancelled, community fisheries now supposedly have greater access to fishery resources in the Tonle Sap Lake (Kaing, 2013). However, many have suggested that this second reform was introduced too quickly, with little forethought, and without addressing the wider social and natural resource policy implications. Unclear plans and strategies formulated at the national level have resulted in growing confusion over the jurisdictions and roles pertaining to sub-national governance (Johnstone et al., 2013; Kim et al., 2013).

Kim et al. (2013) suggest that neither the operational and institutional arrangements, nor the capacity of stakeholders, were mature enough to manage such a wide-ranging reform. For instance, CFIs are taking action to be ready for larger areas; but despite all CFIs in Tonle Sap being registered, some are not aware of their legal rights, roles and responsibilities, while some lack sufficient will and commitment on the part of members (Kim et al., 2013). These shortcomings limit the ability of CFIs to advocate in their members' interest and effectively collaborate with the range of both rights- and stakeholders. There is limited budget support to implement boundary tenure rights in the fisheries (Kaing, 2013); most CFIs still depend on external financial and logistical support (Kaing, 2013). In addition, CFI capacity is not at a level to manage larger CFI areas (Kim, et al., 2013). Johnstone et al. (2013) point out that conflicts over competing resource benefits still remain, and now also include key conflicts over the allocation of water for agriculture and/or fisheries. The current policy and legal reforms are insufficient to address the challenges of sustainable resource management and resilient livelihoods on the aquatic social-ecological systems in Cambodia. Fostering truly effective and just fishery governance (policy and management) in Cambodia will require much greater commitment and direct involvement of all actors, including fisherfolk, CFI committee members, the FiA and related agencies (Kim, et al., 2013). The authors further highlight the emergence of a community-based commercial production model that would render the engagement of CFI members in community management financially beneficial. However, it is questioned to what extent the current legal framework allows this, and how long it would take to implement.

Fisheries reforms and fishing rights in Cambodia

The impacts and consequences of governance and management actions on fisheries are vitally important to those whose livelihoods depend primarily on the harvest and sale of fishery resources. It is not surprising that any unilateral changes to policy and any subsequent regulatory and management actions profoundly affect the manner by which people access, harvest and sell these resources (Kurien et al., 2006).

The fisheries reforms described above engaged a diversity of actors in the design of new rights, involving legal and social normative principles guiding what is permitted or owed to people in the fisheries sector (from pre- to post-production), according to legitimate institutions such as reflect legal and social norms and value systems. The assignment of new rights comes with new responsibilities, which are embedded in new forms of accountability between fisherfolk, their community-based organizations, and the FiA as

state representative.

In the specific case of Cambodia, the fisheries sector reforms do not simply consist of transferring rights from fishing lot actors to community-based fishing organizations – there are two distinct elements involved, each of which responding to specific actors, institutions and constraints. First, the reforms entailed the cancellation of rights from fishing concessions, and then the creation, in-situ, of expanded or new common property rights.

These issues entail new challenges for fisheries management, and the need to pay greater attention to the rights of fisherfolk in developing fisheries policy and management objectives (Charles, 2011; Lam & Pauly, 2010).

- The two phases of fisheries reform can be seen to result in both advantages and disadvantages for small-scale fishers in Cambodia. Small scale fisherfolk have formed their own norms within the communities to claim the right to access resources, solve conflicts, and ensure equity. These unwritten yet widely known and operational norms are referred to as informal or ‘customary’ rights (ICSF, 2007). In this regard, Charles (2011) argues that political or deliberative space is needed to reinforce existing fishery rights, rather than develop new ones. However, the reinforcement and exercise of such standing rights both promises benefits and poses challenges to small-scale fisheries.
- The design of common property rights-based fisheries engages a co-production between the state and communities that requires mutual respect and trust between these partners. A central challenge in Cambodia is that many fisherfolk are not aware of their rights, or are unable to exercise and claim their rights; it is therefore very difficult to challenge fishery officials and to themselves take responsibility as resource managers, because of this limited power, knowledge and lack of enabling institutional arrangements (Isaacs, 2006 in Allison et al., 2012). This requires the central government to devolve rights and sufficient financial and logistic resources to CFIs, ensuring the community is equipped to fulfil its responsibilities and exercise its rights (Allison, et al., 2012; Viner, et al., 2006).
- The benefit that common property rights can provide to communities also depends upon the capacity of fisherfolk to claim and ensure enforcement of any new rights, in a context where previous power structures and relations governing resource extraction in fishing concessions are not totally dismantled (Tep et al., 2007). The exercise of such rights also depends on overcoming all drivers (socio-political, ecological and economic) that create exclusions from the resources, increase vulnerability, and continue to hinder rights being realized. Authors have pointed out that investment in fishing rights has failed where aspects of livelihood and well-being for fisherfolk are not completely addressed (Allison et al., 2012). Indeed, after their establishment, CFIs were made aware of their rights to fish and to stop illegal fishing activities; however, mere awareness

of rights might not be enough for them to assert them (ICSF, 2007). Constraints in this respect might include a lack of recognition of basic human rights in the state control and management of critical livelihoods resources; lack of legally enforced protection and conservation of fisheries resources, and lack of awareness of rights regarding access to alternative livelihoods. Thus the exercise and defence of fishing rights in particular might be hindered by a lack of capacity and finance; limited awareness of fisheries law and related legal instruments; lack of recognition and commitment to community rights by local authorities and relevant agencies, and a legal framework limited to the rights of CFIs, with few options for community members to address poor CFI/FIA performance.

Actions taken to protect rights must include advocacy from the grassroots level, and consultation with all stake- and rights-holders to find possible solutions. In addition, gender awareness should be raised, among both men and women, regarding the critical role played by women in small-scale fisheries, so that both are better able to fully and equally participate in fisheries development, as well as to pursue diversification of livelihoods (ICSF, 2007).

There is a need to 'bundle' these fishing rights in direct accordance to the needs of fishing communities, so that they have legal options to sustainably manage their fishery resources (Ratner et al., 2014). In any comprehensive and inclusive reform process, all fishery actors (state, government, private and finance sectors, and civil society organizations) need to be involved in the design, implementation and evaluation of any reform process, and to rapidly assess and identify whose rights are at risk (Ratner et al., 2014).

In this context, the questions to be asked are: What rights, and for whom? How do such rights contribute to a more holistic approach to fisheries management in Cambodia? How can existing rights or new rights-based processes improve the legitimacy of fisheries co-management processes in Cambodia? How will rights bundles meet new emerging conflicts of interest, foster new alliances, and address new threats and opportunities? What will happen when the rights offered by the state do not meet the needs of community fisheries?

Research Framework and Methodology

Theoretical perspectives on rights

Regarding fisheries rights, we refer to the work of Anthony Charles, who asserts that rights are used to specify the resource users and the resource to be used, in order to allow more effective fishery management (Charles, 2002). When the word 'rights' is used in fisheries discussions, Charles argues that two very different ideas come to mind, depending on one's perspective:

First, from a fisheries management perspective, rights define who can engage in fishing activities and who can be involved in managing the CFI. This perspective is referred to as 'right-based fisheries', which involves developing a process by which fisherfolk have the fundamental right to be included in developing fisheries management objectives and the manner of their implementation. It is concerned with fishing rights based on a search for greater efficiency in resource use. This form of rights arises in what is referred to as rights-based fishery management, focusing on the rights (together with the responsibilities) held by individuals, communities, companies and/or government, specifically in relation to fisheries management (Charles, 2011). This approach argues that to become sustainable and profitable, the fishing sector must move towards a management model allowing for restrictions on individuals' access, means/fishing efforts, and catch size. The assumption is that the more complete the set of rights, the less exposed the fishers are to the unintended action of others (Allison et al., 2012).

Second, from the perspective of the individuals and communities engaged in fishing or otherwise dependent on a fishery, there are human, social and economic rights that can be reinforced or negatively impacted by actions taken within the fishery. This has much wider acceptance, embedding fisheries governance within a broader perspective of human rights.

The evolution of the idea of rights, from rights-based fishing to a human rights perspective, is also echoed in international protocol to promote small-scale fisheries. The 1995 FAO Code of Conduct for Responsible Fisheries (CCRF)⁽⁴⁾ sets out principles and international standards of behaviour for responsible practices, with a view to ensuring the effective conservation, management and development of living aquatic resources, with due respect for the ecosystem and biodiversity. Fishing rights are recognized, but in a manner very much focused on improving resource use efficiency; they also carry an obligation to do so responsibly. More recently, the Voluntary Guidelines for Securing Sustainable Small-Scale Fisheries (FAO, 2015)⁽⁵⁾ aim to support responsible fisheries and sustainable social and economic development for the benefit of current and future generations, with an emphasis on small-scale fishers and fish -workers and related

⁽⁴⁾ The code is available at <http://www.fao.org/docrep/005/v9878e/v9878e00.htm>

⁽⁵⁾ This guideline is available at <http://www.fao.org/fishery/ssf/guidelines/en>

activities, and including vulnerable and marginalized people, promoting a human rights-based approach.

For the purpose of this research, we frame fishing rights following the rights-based approach adapted from the work of Le Roy et al. (1996) on Land Tenure. We differentiate two kinds of rights commonly used in fisheries, namely use rights and management rights, but we recognize other broader human rights, such as cultural, spiritual (freedom of worship) or linguistic rights, as important to fishing individuals and communities.

Use rights can take the form of a bundle of rights, referring to the nature of the entitlement (the fishing ground – ‘what’); the beneficiary (the fisherman – ‘who’) and the conditions for exercising the rights, such as allowable fishing grounds (‘where’); fish catch size (‘how much’); types of fishing gear (‘how’) and period in certain seasons (‘when’), as well as the right to own the benefits of post-harvest processes (processing, sale, and consumption).

The use rights allocated to resource appropriators can be of varying ‘strengths’, ranging from simple access to full ownership. We distinguish 5 degrees of strength:

- Access rights (right to enter a fishing ground)
- Harvest rights (right to fish)
- Claim rights (right to modify the structure of the fishing grounds)
- Possession (right to exclude unauthorized users)
- Ownership (right to alienate fishing grounds)

Use rights are important for fishery management where a specific group of people is defined as having rights to be involved in fishery resources use, even when they are not the owner of the fishery. In adopting use rights, there needs to be flexibility and consideration of different factors, such as the fishery structure, pre-existing rights, history, traditions, society and culture; social objectives; the economic situation; political realities, and fish stock realities (Charles, 2002).

The term management right is more critical for fishery managers, as they define who is responsible for managing fishery resources. Management rights have to do with control. They are the rights given to managers to decide how use rights are designated and allocated. Management rights also include a bundle of rights referring to:

- Recognition of rights - a means to understand the system of rights which have been used over time by fisherfolk, and which are usually embedded in traditional practice. Charles (2011) argues that it is important for fishery managers to reinforce existing or traditional rights, rather than automatically set out to develop new ones. However, when existing rights no longer function to serve to protect the interests of the bearers, it is the responsibility of fishery managers, in conjunction with stakeholders, to develop new rights. They have to critically select rights based on five (5) factors: social objectives; relevance to history and

traditions; social, cultural, and economic relevance; key features of the fish stocks and the ecosystem; and the financial and human capacity of the particular fishery (Charles, 2002).

- Choice of rights – defines the rights allocated to the users: what; who; where; how; how much, and when. This selection needs to be based on the same five factors (above).
- Allocation of rights – determines how rights can be acquired and transferred.
- Monitoring of rights – monitoring the actual exercise of rights and the possible sanction of misuse and circumstances in which this occurs.

The management rights governing the type of use rights allocated to resource users can be controlled in 5 different ways:

- Public – use rights are allocated to all resources users without restriction.
- State – use rights are sanctioned by the state or its representatives.
- Co-management – use rights are determined by a sharing of powers and responsibilities between the state and its responsible agencies, and the community or sub-national groups (Charles, 2011). Rights-based fishing coupled with a co-management arrangement could result in improved production, reduced poverty, greater equity and empowerment of fishing communities (Allison et al., 2012).
- Community – use rights are entirely controlled by a community of users, without interference by the state.
- Private – use rights are managed by private operators.

The design, claims, monitoring and enforcement of rights is viewed as being one dimension of small-scale fisheries tenure (governance), creating a regulatory and incentive structure which can have both positive and negative impacts on governability, i.e., providing benefits from the management of a fishery.

A rights-based approach to fisheries reform in Cambodia

If we picture use and management rights as two axis of a matrix (figure 1), we can represent the process of fisheries reform at play currently in Cambodia:

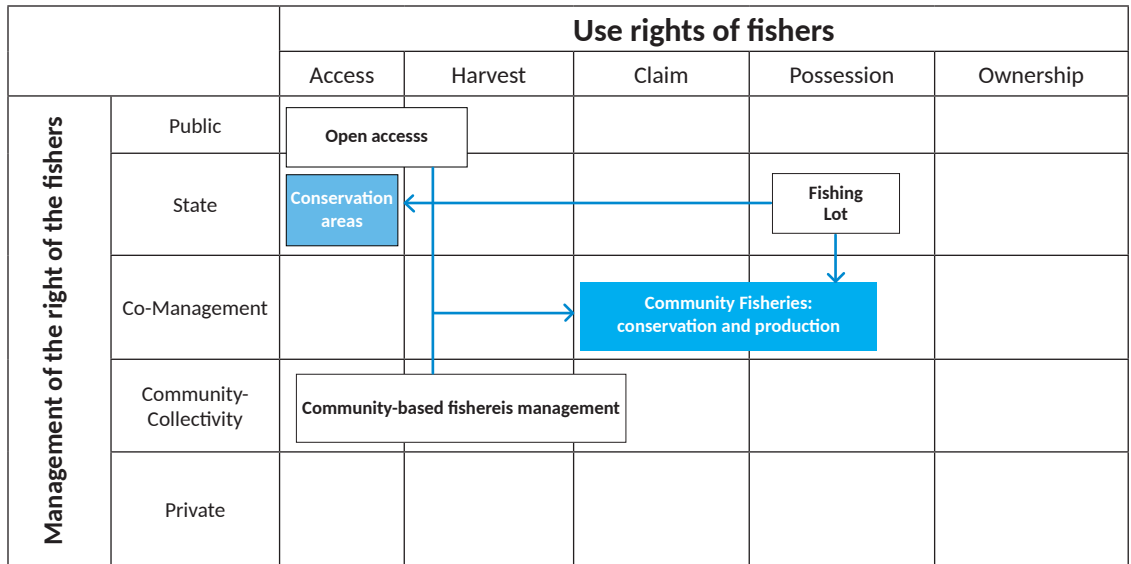


Figure 1: Transformation of Right-based fisheries involved in the Cambodian fisheries reforms

Fisheries governance, in light of the cancellation of exclusive rights previously allocated to fishing lot owners and leasers, is progressively evolving towards replacement by a system where semi-exclusive rights are allocated to fishers via co-management mechanisms. This entails that the new/emergent system of rights is decided upon by fishers grouped under community-based organisations called Community Fisheries (CFis), and the state as represented by the Fisheries Administration (FiA). Co-management mechanisms are also instituted to regulate both open access fisheries, and any self-organized community-based fisheries management, with their own set of rules and institutions.

The co-management approach rests on the premise that local communities living close to the relevant resources are best suited to sustainably manage those resources: they know the local ecosystems better than anyone else, and so are in a better position to identify both management problems affecting those ecosystems and possible solutions (Li, 2002). Co-management is concerned with the involvement of users in deliberative decision-making, and with building linkages between communities and government institutions. Adding an explicit focus on increasing the effectiveness of stakeholder participation, this management approach is supposed to foster conflict resolution and benefit community-based economic and social development (Armitage et al., 2007).

There are different ‘faces’ of co-management: as sharing of power and responsibility for management; as institution building for local-level and government agencies; as trust building; as process; as social learning and problem solving, and as governance-sharing of

management rights and responsibilities (Armitage et al., 2007). Co-management in the context of fishery rights is a sharing of rights, powers and responsibilities for management, between the state and its responsible agencies and the community or sub-national groups (Charles, 2011).

Research objectives and questions

Against the background of the fisheries reforms, and guided by a rights-based fisheries approach, this study will investigate and document the different types of fishing rights influencing the management of CFI in Cambodia. The specific objectives are to:

- Identify the existing fishing rights to access, use and manage fisheries resources within the CFI system, and to assess the adequacy of these rights in light of the pre-existing fisheries norms prevailing in fishing communities.
- Identify the challenges to defining, claiming and asserting these rights within the CFIs.
- Identify capacity building needs with respect to the above, for local fisherfolk, women and youth groups, CFIs and authorities responsible for sustainable fishery management.

To meet these objectives, the research will be guided by the following questions:

- What are the different types or bundles of rights actually being held by fishery actors – CFI, FiA, etc.?
- Are CFI members well informed of those rights and ready to uphold them?
- What are these rights and how might they affect related fishery actors (CFI, non-CFI, and fishery authorities)?
- What are the existing limitations to the rights held by fisherfolk in the context of CFI in Cambodia?
- How can these rights and those who must uphold them actually contribute to better fisheries management?

Analytical approach

To address these questions and objectives, the study proceeds with a comparison between formal fishing rights (use and management rights) as defined in the Cambodian legal framework (Law and Sub-decree), and how those rights are asserted, in context, by different CFI groups across the country (Figure 2).

The comparative approach implies that we examine i) the institutional fit between what is cast formally in law, and its actual implementation ‘on the water’; ii) whether the rights as defined in the legal framework actually help to improve fisheries management and governance, and iii) the context or conditions under which these rights are successfully asserted and exercised, i.e., examples where a rights-based approach results in more effective local fisheries governance and management and thus, improved fisheries.

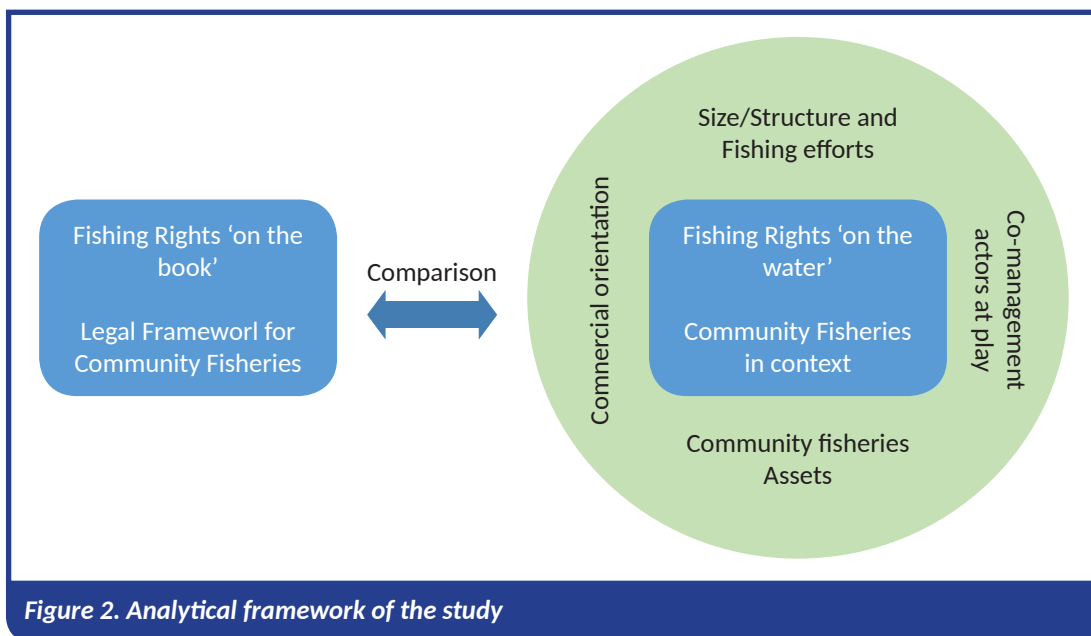


Figure 2. Analytical framework of the study

Study area and community fisheries profiles

The field survey was conducted with nine (9) CFIs in seven (7) provinces of Cambodia. These were grouped according to their location in inland provinces, i.e., around the Tonle Sap (Battambang, Pursat, and Kampong Chhnang), or in coastal provinces (Kep, Kampot, Koh Kong and Sihanoukville) (Figure 3). Key characteristics of each CFI are detailed in Table 1.

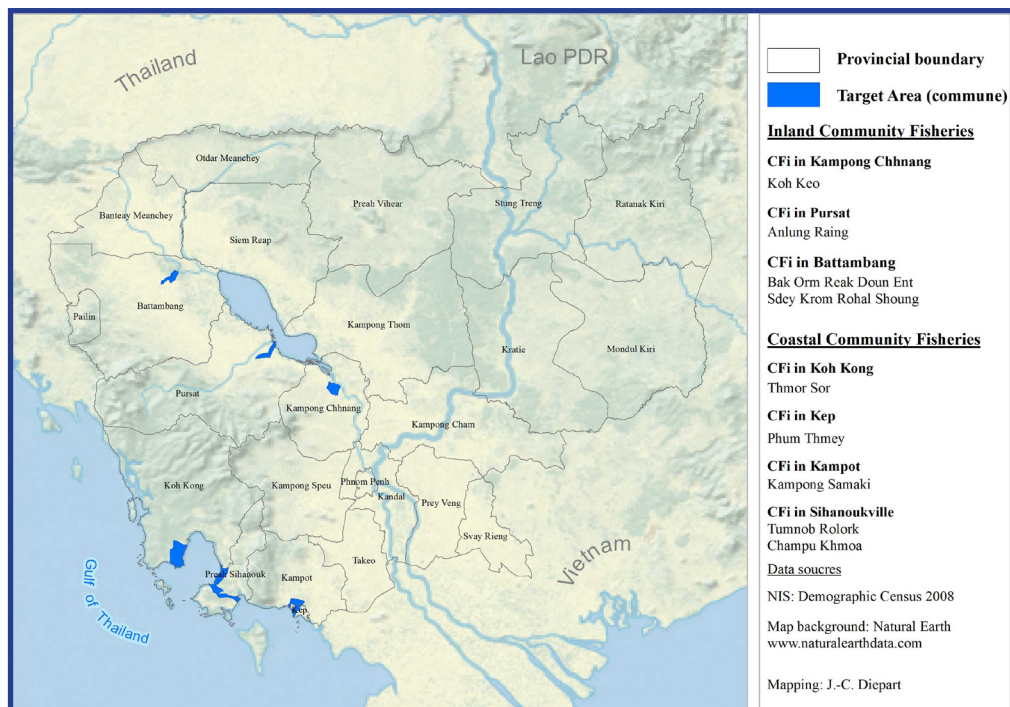


Figure 3: Map of study area

The four selected inland community fisheries are: Koh Keo CFI, located in Kampong Chhnang Province, consisting of 113 members and covering 1,206 ha, with 1 ha of conservation area; Anlung Raing CFI, a floating community in Pursat Province of 178 members, covering 1,341 ha; in Battambang Province, Bak Orm Reak Doun Ent CFI, with 1,466 members but a relatively small total area of 1,075 ha, and Sdey Krom Rohal Shoung CFI, consisting of only 370 members but with a total area of 1,390 ha with 9.6 ha of conservation area – the largest of the CFIs included in this study.

The five coastal province CFIs are: Tumnob Rolork and Champu Khmao CFI in Preah Sihanouk Province, covering areas of 1,189 ha and 1,522 ha respectively. While comparable in both overall and conservation zone size, membership levels differ markedly, with Tumnob Rolork CFI at 1,369, and only 285 at Champu Khmao CFI. Kampong Samaki CFI in Kampot Province covers 578 ha, in the form of 528 ha of fishing area and 50 ha of conservation area; Phum Thmey CFI is in Kep Province, accounting for only 224 ha area – the smallest of the 9 CFI, yet with disproportionately high membership at 110. In Koh Kong Province, Thmor Sor CFI represents the largest of the coastal CFIs in terms of size (11,220 ha), yet with only 540 members.

Zone	Name of Community Fisheries	Location	Total Members	Total CFI Size (ha)	Size of Fishing Area(ha)	Size of Conversation Area(ha)
Inland Community Fisheries	Koh Keo	Koh Keo village, Svay Chrum, Rolea B'ier district, Kampong Chhnang province	113	1,206	1,205	1
	Anlung Raing	Kampong Lor village, Kampong Por commune, Krakor district, Pursat province	178	1,341	1,338.5	2.5
	Bak Orm Reak- Doun Ent	Bak Orm Reak village, Prek Luong commune, Aek Phnom district, Battambang province	1,466	1,075	1,073.04	1.96
	Sdey Krom-Rohal Shoung	Sdey krom village, Prek Luong commune, Aek Phnom district, Battambang province	370	1,390	1,380.4	9.6
Coastal Community Fisheries	Tomnob Rolork	Phumi Mouy village, Tomnob Rolork commune, Steung Hav district, Sihanoukville province	1,369	1,189	1,133	56
	Champu Khmoa	Champu Khmoa village, Toul Toteung commune, Prey Nob district, Sihanoukville province	285	1,522	1,472	50

Coastal Community Fisheries	Kampong Samaki	Kompong Thnaut, Kon Sat, Teouk Chhou district, Kampot province	396	578	528	50
	Phum Thmey	Thmey village, Sangkat Prey Thom, Kep town, Kep province	110	224	214	10
	Thmor Sor	Srae Thmei village, Thmor Sor commune, Botum Sakor district, Koh Kong province	540	11,220	10,820	400

Table 1: Profiles of the 9 community fisheries

Data and data collection methods

The research collected primary data using focus group discussions (FGD), key informant interview (KIIs) and case study interviews:

- The characterization of the CFis is based on primary quantitative data. In certain cases, the information collected was highly qualitative, and was quantified using a scoring system (from 1 to 5, weakest to strongest) based on specific criteria determined among the researchers and detailed in Annex 1.



Focus group discussion on fishery right with Bak Orm Reak Doun Ent CFI, Battambang Province

- The size and structure of the CFIs: number of members; total CFI area; size of open space fishing area; size of mangrove/flooded forest/ conservation area, and size of areas where fishing is prohibited.
 - The fishing efforts: fish catch per capita (rainy and dry season).
 - The assets of the community: batteries/flashlights; patrolling station; cement boundary markers; banners; a CFI hall, etc.
 - The social capital resulting from interactions between co-management actors: scoring the collaboration with (i) local authorities; (ii) fisheries administration/Cantonment, and (iii) NGOs.
 - The commercial orientation of the community fisheries.
- The participatory Focus Group Discussions (FGD) were conducted with CFI members – including men, women, and youth (under 18 years of age) – to assess the situation and challenges of CFI management; how CFI members come to understand their rights and responsibilities, and any gaps in capacity with respect to the exercise of these rights and fulfilment of their responsibilities. In total, nine FGDs were conducted across the nine CFIs, with a total of 120 participants (55 female).
 - Key Informant Interviews (KIIs) were conducted with relevant stakeholders, including Provincial FiA; local NGOs; commune authorities; the Fisheries Coalition, and the heads of the CFIs in which the FGD were conducted. These KIIs aimed to gather informant perspectives on the situation and challenges of fishermen in exercising their rights and responsibilities, and their support and suggestions for improving sustainable fishery resources management. In total, we interviewed 37 participants (6 female).
 - In each CFI, we randomly interviewed 4 non-CFI members, for a total of 32 CFI households, 8 of which were female-headed. These interviews were conducted in order to assess how non-members come to understand their rights related to fishing activities, and how they perceive the management and implementation of CFI within their area. The interviews also aimed to determine whether non-members know of and join CFI activities.

Community Fisheries typology

To make sense of the diversity and heterogeneity of the CFIs, we characterized each with indicators that describe, along five broad topics, the context in which it has evolved:

- The size and structure of the CFI
- The fishing efforts
- The assets of the community
- The social capital resulting from the interaction between co-management actors
- The commercial orientation of the CFI

We established a typology of CFIs, with the aim of grouping community fisheries into relatively homogenous groups, i.e. based on similar characteristics (Table 2).

These indicators, of total CFI area size; total number of members; size of fishing area; size of conservation zone; CFI size per member; fishing zone area per member and conservation zone area per member, are well correlated. The study also found that the relationship between CFI and FiA Cantonment is well correlated with the relationship of CFI with local authorities; that is, a community characterized by better cooperation with the FiA Cantonment tends also to have better cooperation with local authorities such as commune councils, village chiefs, and the police. The indicators of physical assets – such as guard posts, cement poles, artificial fish breeding shelters, flashlights or a meeting hall – and the area of the community fishing grounds are also correlated; once there is a larger fishing zone, more physical assets are used for the community activities such as patrolling and holding meetings.

CFI exhibiting similar characteristics were categorized into four groups: (i) smaller and institutionally less dynamic, (ii) smaller and institutionally more dynamic, (iii) larger and institutionally less dynamic, and (iv) larger and institutionally more dynamic:

1. Smaller and institutionally less dynamic: 2 community fisheries, including Koh Keo CFI and Tumnob Rolork CFI, fall into the same typology – relatively small, poor, and less dynamic. This status is correlated to lesser levels of communication with and support from NGOs. Although Koh Keo CFI has fairly good communication with FiA Cantonment and local authorities, in contrast to Tumnob Rolork it has no commercial based-oriented activities, such as fish processing. Neither community has adequate physical assets.
2. Smaller and institutionally more dynamic: Bak Orm Reak Doun Ent CFI, Kampong Samaki CFI, and Phum Thmey CFI are small, but institutionally dynamic. Bak Orm Reak Doun Ent CFI is strong in terms of its relationship with relevant stakeholders, whereas the other two CFIs are solid in terms of community physical assets and sub-group activities regarding processing, a savings group, and crab bank. Therefore, they tend to be richer and more dynamic.
3. Larger and institutionally less dynamic: although they have relatively big fishing grounds, Anlung Raing CFI, Champu Khmao CFI, and Thmor Sor CFI are poor and institutionally not very dynamic. This is attributed to two main factors, namely lower levels of community-based income earning activities and social capital, particularly with respect to relationships with local authorities and FiA Cantonment.
4. Larger and institutionally more dynamic: Sdey Krom Rohal Shoung CFI is the healthiest and most dynamic CFI among the nine studied. This is a result of strength across vertical and horizontal connectivity; physical assets for community works, such as meetings and patrolling, and community-based commercial activities, with permits to sell fish in the conservation zone, and established savings groups.

Type	Name of CFis	Zone	Province
1. Smaller and institutionally less dynamic	Koh Keo Cfi	Inland	Kampong Chhnang
	Tomnob Rolork CFI	Coastal	Sihanoukville
2. Smaller and institutionally more dynamic	Bak Orm Reak- Doun Ent CFI	Inland	Battambang
	Kampong Samaki Cfi	Coastal	Kampot
	Phum Thmey CFI	Coastal	Kep
3. Larger and institutionally less dynamic	Anlung Raing CFI	Inland	Pursat
	Champu Khmao CFI	Coastal	Sihanoukville
	Thmor Sor CFI	Coastal	Koh Kong
4. Larger and institutionally more dynamic	Sdey Krom- Rohal Soung CFI	Inland	Battambang

Table 2: Community Fisheries Typology

Review of the Cambodian legal framework on Community Fisheries and small-scale fishing rights

Cambodian small-scale fishing rights are written into the Royal Decree on the Establishment of Community Fisheries, the Law on Fisheries, Sub-Decree on Community Fishery Management, and Ministerial Proclamation on Community Fishery Guidelines, i.e., by-laws, internal rules, agreements and management plan (Kaing, 2013).

In addition to this legal framework for fisheries management, the RGC has generated fisheries management guidelines called the Cambodian Code of Conduct for Responsible Fisheries (CamCode), a national version of the Code of Conduct for Responsible Fishing (CCRF). The Cambodian legal framework on CFI or small-scale fishing rights is reviewed as follows.

Annex 2 presents the different types of rights under the two broad categories: use and management. The following is a text that describes the main aspects of Annex 2.

Royal Decree on the Establishment of Community Fisheries (2005)

In Article 1, “all Cambodian people are given rights to voluntarily establish community fisheries in their own areas in order to strengthen their livings by using fisheries resources in a sustainable manner”; yet it goes on to state that the management of community fisheries is under the jurisdiction of the Ministry of Agriculture, Forestry and Fisheries. Article 3 states that Community Fisheries whose fishing areas are adjacent are able to establish community fishery federations (RGC, 2005).

Law on Fisheries (2006)

Rights regarding the traditional use of fishery resources for local users are ensured under the Law on Fisheries and other related laws (Article 2). Subsistence fishing can be done at any time in the open access area, small-scale fishing areas, and marine fishery domains by using small-scale fishing gears (Article 31). The rights of Cambodian peoples, especially Community Fisheries are mainly stated in the Chapter 11 of the Law on Fisheries. For instance, Article 59 states that the Cambodian people have the right to create CFIs in order to contribute to the sustainable management, conservation, development and use of fishery resources. CFIs are authorized to manage their designated resources, based on submission of a community management plan and guidelines of the community fishery; however, they do not have the right to sell, exchange, hire, donate or divide the CFI area (Article 62).

Fisheries management in Cambodia is under the jurisdiction of MAFF (Article 3), while the Fisheries Administration (FiA) is entitled to responsibility for fishery resources management (Article 6). This government body plays a dominant role in CFI development and law enforcement in terms of inspection, monitoring, surveillance, control of all fishery activities (Article 7) and fisheries offences (Article 72). Article 72 further indicates the jurisdictional responsibility of FiA Officers in legal procedures, including investigating offences and filing complaints. Article 74 concerns the obligations and responsibilities of local authorities and actors who have the duty to investigate, prevent, report, and to stop illegal fishing activities or temporarily detain offenders and evidence (RGC, 2006).

Sub-decree on Community Fisheries Management (2007)

The Sub-decree on Community Fisheries Management further details rights, roles, and responsibilities of CFIs in fishery management. CFIs have a role to play in managing and conserving fishery resources in line with CFI by-laws; in CFI area management, and in ensuring all community fishery members have equal rights in the sustainable use of fishery resources. CFIs have the responsibility to immediately report any fisheries violations in the CFI area to the nearest FiA. They also have the right to work directly with the FiA to stop all fishery violations, by submitting requests to authorities for intervention, seizure of evidence of fisheries violations, and prosecution of offenders. Community members have the right to fish at family-scale, in accordance with the law and other regulations related to fisheries and the by-laws specific to Community Fisheries.

CFI can access, use and manage all fisheries resources in accordance with the community fishing area, and also engage in aquaculture, harvest, sell as individual members, in accordance with the community fishing area agreement and management plan (Article 11). However, they do not have the right to sell, exchange, rent, donate, share, divide, borrow, or transfer the community fishing area in any form (Article 13).

Fisheries resource users who are non-members of the CFI group have the right to enter, leave, and use fisheries resources in the CFI area, but must comply with the by-laws and internal regulations of the community fisheries, community fisheries management plan, and all other legal instruments that relate to fisheries. Moreover, CFIs have rights with respect to participation in all community activities and in decision-making (Annex 2; RGC, 2007).

Prakas on Guidelines for Community Fisheries (2007)

The prakas defines the guidelines for implementing CFIs. It outlines the basic rules and procedures for the establishment, organization, and functioning of CFIs in Cambodia. It is (should be) aligned with Cambodian fisheries policy, ongoing reforms and all subsequent laws and other legislation relevant to the management of fisheries. There are four types, including community fisheries by-laws, internal rules,

agreement, and community fishery area agreement. These are mandatory for all community fisheries. Rights, roles, and responsibilities are mainly detailed in CFi by-laws and internal rules. The FiA participates in follow-up, monitoring, and enforcing implementation of the CFi area agreement and management plan, and making annual evaluations with participation from the commune council, CFi committee, and local people (MAFF, 2007).

The development of CFi in Cambodia has been mainstreamed by a number of donor-driven initiatives. There is actually very little variation in the CFi by-laws and regulations across the country.

CamCode: Cambodian Code of Conduct for Responsible Fisheries

The Cambodian Code of Conduct for Responsible Fisheries is not a law but is included as a component (Vol. 3) of the Strategic Planning Framework for FiA (Fisheries Administration, 2011a), which provides guidelines and best practice principles, in line with relevant Cambodian and international laws, to all stakeholders in the fisheries sector in Cambodia on how to best comply with Food and Agriculture Organization of the United Nations (UN FAOs) Code of Conduct of Responsible Fisheries (CCRF). There is no legal requirement to follow it, nor legal penalties for not doing so. There are fifteen general principles. One of them concerns recognizing and upholding the clear separation of roles and responsibilities of stakeholders involved in the management, development, use and conservation of fisheries and aquatic resources.

Another principle is that the importance of fisheries to vulnerable groups, particularly women and marginalized groups, should be fully recognized. This principle is connected to the recognition of the key role of women in harvesting, aquaculture, processing, trade, purchasing, preparation and provision of fish for household consumption, and mainstreaming gender in all aspects of fisheries management, development, conservation, and use. The principle also emphasizes the provision of appropriate alternative livelihoods for vulnerable groups and small-scale fishers whose access is affected by changes in laws or policies.

More importantly, rights regarding the use of living and non-living aquatic resources carry the obligation ensure the effective conservation and management of those resources. All participants in the Fisheries sector of Cambodia should, to the extent permitted by national laws and regulations, ensure that decision-making processes are transparent and achieve timely solutions to urgent matters. Partners should understand the traditional rights of small-scale users of aquatic habitats and, where possible and in line with current policy, preferential access to those habitats should be provided to small-scale users, consistent with the sustainable use of those resources (Fisheries Administration, 2011a).

Voluntary Guidelines for Securing Sustainable Small-Scale Fisheries (2015)

The Voluntary Guidelines for Securing Sustainable Small-Scale Fisheries (SSF) (<http://www.fao.org/fishery/ssf/guidelines/en>) address sustainable small-scale fisheries in the context of food security and poverty alleviation. The SSF Guidelines place a high priority on the realization of human rights, for both men and women, and on the needs of vulnerable and marginalized groups in developing countries. Small-scale and artisanal fisheries cover all activities along the value chain, including pre-harvest, harvest and post-harvest activities undertaken by both men and women, playing an important role in food security and nutrition, poverty eradication, equitable development and sustainable resource utilization. There are thirteen guiding principles for small-scale fisheries, concerning human rights; culture; discrimination; gender; equity and equality; consultation and participation; rule of law; transparency; accountability; economic, social and environmental sustainability; holistic and integrated approaches; social responsibility, and feasibility and social and economic viability (FAO, 2015).

Right-based fisheries in context

The findings are presented by theme (Figure 4) to reflect the diversity of issues and challenges encountered in both the design and implementation of right-based fisheries, by CFI groups and other co-management actors, such as Fisheries Cantonment and local authorities. For each theme, a comparison is made between rights-based fisheries in context, and rights as defined by formal law or 'by the book'.

Our study suggests that the rights-based regulations and incentive structures that are in place for community fisheries are inadequate to improve the management of either coastal or inland fisheries in all dimensions (productivity, control of illegal activities, benefit sharing, etc.). However, we highlight how local informal arrangements, made at the margin of a rights-based legal framework, can help to improve CFI management. These examples serve to formulate a wider, more inclusive fisheries policy.

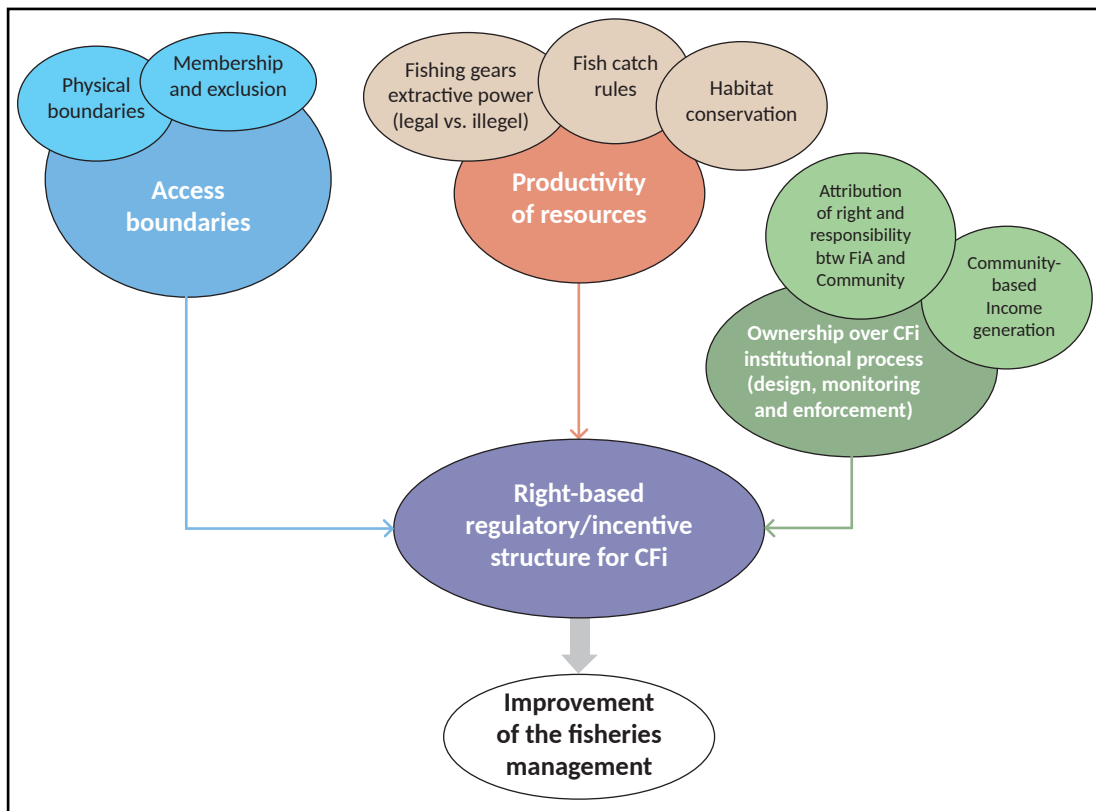


Figure 4. Elements determining the right-based regulatory and incentive structure for community fisheries

Rights and community fisheries access boundaries⁽⁶⁾

The CFi Sub-decree and all CFi regulations suggest that access to a CFi is not exclusively reserved for CFi members. Assuming they are aware of their rights, non-CFi members are also entitled to access, provided they respect the prevailing rules of the CFi. This situation was observed in all nine CFis we investigated. On the other hand, the delineation of CFi geographic boundaries generally includes a fishing area smaller than the area where fisherfolk actually fish. All fishermen continue to fish in areas outside CFi area, based on their labour capacity. Another aspect of the CFi 'boundary problem' is that the CFi covers an indistinct area that consists of seasonal refuges, and does not represent a distinct fisheries-relevant ecosystem. Although fishing effort may be controlled and specific areas reserved, fish are mobile. In the end, only capture determines benefits. The mobility of the resource stock casts doubt on the feasibility of artificially differentiating community fisheries from open access areas within a single integrated water system. As Van Acker (2005) states, the dynamics point to a continually rising discount factor, where all users will manage the fishery as if it was open-access, and the consequent collapse of the legal setup.

⁽⁶⁾ Access boundary here refers to the physical boundary of the CFi. The demographic boundary distinguishes members from non-members of the CFi.

The combined effect of these factors creates two central problems in each CFI investigated: i) fishing grounds belonging to one CFI are used by both members and non-members of that particular CFI and ii) many fishermen are, at the same time, insiders in their own CFI and outsiders in others.



Fishing vessels on their way out on Kampot River

This situation results in fishermen adopting different logic and attitudes towards complying with the rules established by CFI. Members of a CFI are likely to be more aware of rules and regulations in their own CFI, and are socially more accountable to the other members and to the management committee of their particular CFI. Consequently, they are more inclined to comply with the rules. Non-members are not necessarily aware of the rules of the CFI because they have not participated in their design processes; they are less accountable to the members of the CFI and management committee of the CFI they are fishing in, and so are less likely to comply with their rules (or limit fishing efforts to protect future stock). We suggest that this is one of many reasons why illegal fishing has remained a central problem, despite the widespread establishment of CFI management committees.

This contradiction was observed in every CFI we visited, but was most apparent in the coastal area CFIs. The intertidal area where the CFI regulations are actually applied is rather small in comparison with the total intertidal area used by fisherfolk. The restrictions are thus easily circumvented by local fishers, who simply operate in areas outside of that designated as a CFI, where a more business-as-usual attitude prevails.

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In inland fisheries, the cancellation of the fishing lots is perceived positively by the fishermen because it has resulted in an expansion of the community fisheries area. However, our respondents have also indicated that the opening of the fishing frontier has also opportunistically attracted new people into fishing (including commercial middle-scale fishers), and this increase has added to management uncertainty and a corresponding increase of illegal fishing.

Rights to community-based commercial fisheries operations

In order to support livelihoods, the CFIs have been supported by FiA Cantonments of the National FiA and Non-Governmental Organizations (NGOs), through the development of groups such as savings groups, fish processing groups, shrimp processing groups, and crab banks, and provision of trainings in the raising of livestock and production of souvenirs. These activities are carried out by members of the CFI, but the benefits generated are then distributed to individual members, and rarely to the community as a whole.

In fact, according to the Sub-decree on Community Fisheries management, a CFI has the right to fish, engage in aquaculture, harvest, sell, and use all fisheries resources in accordance with the community fishing area agreement and management plan (Article 11). However, the sale of fish is possible only by individual fishers and their households; CFI-centred commercial fisheries cannot be undertaken on behalf of the wider community or CFI members.

Despite support from the NGO sector, any CFI scheme has a very limited capacity to generate revenue to help finance its regular activities, such as patrolling, organizing, congress and consultations. Collection of a membership fee is foreseen, but the principle does not seem very popular amongst local communities. In any case, this would

not procure a significant budget for the daily activities of the community, and in this respect, co-management arrangements are highly dependent upon either external support or the FiA. This absence of a collective commercial right to sell is a key bottleneck of the system. The CFi system cannot be sustained in the long term without adequate funding, which the FiA does not have or is unwilling to invest in actual devolution of management decision-making. A weak financial state therefore limits the negotiation power of the CFi in subsequent co-management deliberations.

One notable exception is the community-based commercial fishing activity in Sdey Krom Rohal Shoung, classified in the typology as a larger and wealthier (group 4). In this area, a specific agreement with local FiA has allowed the community to sell fish from the conservation pond once a year in the dry season, to avoid the loss of the fish as the pond is too shallow their survival, and to use a portion of the income generated to finance CFi operations. From a strict legal perspective, these arrangements do not comply with the formal law. However, they are viewed by the local communities as effective activities in fisheries management.

Rights on Fish Catch and Fishing Gears

The Sub-decree on Community Fisheries Management explicitly states that CFis have rights to fish at family-scale fishing area (Article 3), defined by the Law on fisheries as an area reserved for individual or traditional community fishing, generally not for commercial purposes (Article 10), and where only family-scale gears as defined by MAFF can be used (Royal Government of Cambodia, 2006). Despite these restrictions, the sub-decree leaves it up to each individual CFi scheme to place limits on fishing gear numbers, size, and length, and/or individual catch, yet those must comply with fisheries law and the other related legislation.

At the CFi-level, there is a widespread perception among fishermen that individual fish catch is declining (observed in all CFi we visited), and a clear understanding that fishery stocks need to recover. All those interviewed reported a decrease in individual fish catch over the last five years and an increase in the number of fishers, particularly outsiders, using the fishery. This decline in individual fish catch is an issue that CFi management does not seem to be able to address, and one which decreases the sense of ownership with respect to community fisheries management.

However, none of the CFi regulations we have encountered include management provisions that actually try to limit the fish catch. Basically, fishermen have right to fish as much as they can, according to the availability of labour and decision-making rules at the household level.

Based on our field observations, the CFi is not the appropriate agency to control this. But the conservation of spawning and juvenile rearing grounds is very important for maintaining fish production. In all CFis assessed, a conservation area has been assigned to help secure fish production. These are the only protective measures undertaken by CFis to

help maintain fisheries. These conservation areas are the most valuable areas of the CFi, and are under surveillance and monitoring by members. However, given that these conservation areas are usually refuge zones for migratory fishes (in both inland and coastal areas), attempts to conserve the fishery are not necessarily benefitting the people involved in the conservation efforts in that particular area.



Small scale fishers checking fishing gear before fishing in Thmor Sor CFI, Koh Kong province

As for fishing gear, there is a clear sense among CFi representatives of which gears are legal or not. The general perception is that the use of illegal fishing gears is in decline, but at the same time, all our respondents consider that illegal fishing remains a key problem in CFi management. One reason why individuals are not complying with the rules prohibiting the use of illegal fishing gears and fishing in protected areas is that the immediate benefits of higher catch outweigh the costs of being caught and the decline in future stocks (Viner, et al., 2006). CFi representatives consider they have very limited leverage to address this problem, due to limited resources to finance, monitoring and regulation enforcement. From a broader perspective, we observe that the rights-based incentive structure to deter illegal fishing is actually very weak.

Rights to participate in decision-making processes

Co-management is the tool used to manage fishery resources in Cambodia. As set out in legal documents, the rights and responsibilities of management have been shared among responsible government institutions at national and sub-national levels and CFIs. According to Chapter 11 of the Law on Fisheries, the FiA and local authorities play crucial roles in establishing a CFI, approving a community's management plan, monitoring of implementation, and ensuring enforcement of related laws. They even have the discretion to cancel the CFI area agreement, if they think the CFI is not acting or performing well.

In turn, communities have the right to manage their fishery resources with regard to of CFI management plans, procedures, and guidelines. The rights of the communities are specifically to enforce and comply with rules dictated by the FiA. Article 11 of the Sub-decree illustrates this: "community fisheries have the right to cooperate with the fishery competence to suppress all fisheries violations in the community fishing area. In cases of urgency and need, the CFI can request intervention by local authorities to seize evidence of fisheries violations, detain the offender then send him or her immediately to a competent Fisheries officer to deal with the offense in accordance with the law". With the exception of two CFIs (Kep and Kampot), in all CFIs we assessed the arrest and sanctioning of offenders is under the control of the FiA. The CFIs have the right to arrest and detain those caught for violations of the fishery law and must turn them over to FiA authorities. In a broader perspective any conflict resolution involving breach of CFI agreement and regulations must go through the FiA. Although the responsibility held by CFI in terms of monitoring and patrolling is significant, there is no formal role given to community-based management for conflict resolution within the fishery, despite the existence of conflict management mechanisms at the community-level.

The Sub-decree on Community Fisheries envisions co-management in ways that are best described as community-based consultation and monitoring for fisheries management. Indeed, the role and power of the FiA in co-management is dominant; the community does not have any power to directly enforce CFI rules. This contradiction has much to do with each party's perception of the key objectives of CFIs: for the FiA, CFIs are best considered as an arm of the state to improve fisheries management; whereas, for community users, the CFI is seen as an institutional arrangement to improve fish catch, livelihoods and food security.

This definition of rights and responsibilities has two major consequences: a) fishermen usually have a weak sense of ownership towards community fisheries institutions and, given the strong control of FiA over the whole CFI process, b) activities are sometimes undertaken exclusively by the CFI committee, creating an important gap between CFI members and committee members. This was prevalent in the Type 1 and 3 CFIs, i.e., those characterized as less institutionally dynamic (irrespective of size). Based on our field observations, when an NGO is committed to support a CFI, the concerns and aspirations of regular fishers are better taken into account and, in certain cases, the NGO helps strengthen linkages between the CFI and the FiA in the management process.

Notable exceptions to this scenario were observed in the cases of the CFIs in Kampot and Kep Provinces, where an unofficial agreement exists between the FiA and CFI, allowing the communities to temporarily arrest offenders before the arrival of the FiA officers if they are capable of doing so. This arrangement is not in compliance with legally defined rights and responsibilities, yet it does enable more effective fishery resources management.

Recommendations

- Rights for the community fisheries to conduct community-based commercial activities should be integrated into revisions of the sub-decree on community fisheries. Scale, potential resources, and location need to be very carefully considered while benefits sharing and use also need to be precisely stated.
- FiA with relevant partners should introduce and pilot community-based fishing/aquaculture and post harvesting commercial activities in conjunction with the selected community fisheries.
- Livelihood improvement and fisheries resource conservation through the establishment of sub-group activities, such as fishing processing groups, crab banks, multi-agriculture, youth groups, and community based patrols. The Community Fisheries need to be effectively financially and technically supported, expanded, and monitored.
- Implement community fishery-based policing through establishing effective local participatory monitoring to support the right of CFIs to temporarily stop actual illegal fishing activities and detain offenders and provide evidence without a priori involvement of a Fishery Administration Officer.
- The rights of non-community fishery members to access and fish in the community fishing area should be restricted under some conditions such as levying a fishing fee to the community, respecting community regulations and other related legal documents, participating in community activities, for instance, planting and reporting fisheries offence to the competent authorities.
- Allocate fisheries benefits to individual members from the community based on the productivity of individual fisheries ecosystem rather than collective CFI capacity through the application of ecosystem-based fisheries management (EBFM) and review the current community fishing governance structure for any reforms to individual CFI by-laws.
- The enable wider participation of all related stakeholders into the Technical Working Group on Fisheries in order to support the timely, just and effective implementation of SSF Voluntary Guidelines.
- Create a transparent and accountable assessment mechanism for reviewing the effectiveness of any and all management activities carried out by all Royal Government of Cambodia (RGC) Ministries and line agencies involved in the implementation and administration of the Food and Agriculture Organization of the United Nations (FAO) Sustainable Small-scale Fisheries (SSF) Voluntary Guidelines.

- Create a transparent and accountable reporting mechanism by which the results of any and all SSF Voluntary Guideline implementation assessments will be reported in a timely fashion to the FAO and all relevant Cambodian state, civil and non-state actors involved in the monitoring and evaluation of the Voluntary Guidelines for SSF implementation activities.
- Create a transparent and accountable review mechanism to make recommendations for future legal reforms in order to better harmonize real fishing practice in both marine and freshwaters with the SSF Voluntary Guidelines and Cambodian fishing laws, sub-decrees and proclamation processes.

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Annex 1. Explanation on weighting criteria for CFi typology

<p>Weight of collaboration with local authorities</p>	<p>This is based on interviews with commune councillors (CC) and CFi members. For instance, when the team interviewed CC in Thmor Sor CFi, he said that there is no collaboration with CFi because CFi has never sent report to CC or informing about any activities of CFi. That is why we decided to rank 1 for Thmor Sor CFi. Another example, for Sdey Krom-Rohal Soung CFi it is found that CFi and CC has strong collaboration. Because CFi always work closely with CC, report about activities; invite CC to join CFi meeting and field work. We obtained this information from CFi leader and CC during field testing and actual field data collection. In addition, for Koh Keo CFi, during scoping visit and field data collection, participants reported about the case of illegal fishing activities combating, which received support from CC. For ranking number 2 is for CFi that has occasionally collaborative with CC. CC rarely be invited by CFi to join any meeting. 5 means there is very good collaboration compare to other CFis and 1 means there is no collaboration at all. The comparison is made only among these 9 CFis.</p>
<p>Weight of collaboration with Fisheries Administration Cantonment</p>	<p>The way to weight this point is not much different from how collaboration with local authorities was ranked. We discussed how often each CFi work with FiA; what kind of support has FiA provided; what kind of intervention when CFi reported about illegal fishing activities. For example Sdey Krom Rohal Soung, have received lot of trainings from FiA, moreover, this CFi have strong support in case of emergency needed (when the fish were dead, FiA were quickly respond to check). Anlung Raing Rang rate only 1 because of the collaboration with FiA is too low and this CFi is too far to reach.</p>

Weight of collaboration with NGOs	We investigated about which and how many NGO are working with CFI; what kind of support has CFI received from those NGOs, how often NGO come to CFI,
Weight of community based-commercial orientation	We looked at what kind of livelihood intervention means in each CFI. For instance, in Phum Thmey CFI, many livelihood based projects were reported including souvenir producing, crab bank, saving group, and livestock, which part of benefit was shared to CFI and its members. Another case, in Koh Keo CFI there was no community commercial at all.

Annex 2. Review of rights-based fisheries rules by individual legal type

User Rights	Legal Framework
<i>Where can CFI members fish (what fishing ground, etc.)</i>	<p>Law on Fisheries</p> <ul style="list-style-type: none"> Subsistence fishing can be operated at any time in the open access area and in the family-scale fishing areas, in freshwater fishing lots during the closed season or in marine fishery domains by using small-scale fishing gears (Article 31). <p>Sub-decree on CFIs Management</p> <ul style="list-style-type: none"> CFI has rights to fish, do aquaculture, harvest, sell, and use all fisheries resources in accordance with the community fishing area agreement and management plan (Article 11). CFI members have right to fish at family-scale in accordance with the law, other regulations related to fisheries, and the by-laws of the CFIs (Article 13). <p>CFI Internal Rules</p> <ul style="list-style-type: none"> Fishing in CFI conservation area is not allowed. It must be interrupted and the offender must make a promise to stop fishing, and the case must be reported immediately to local authorities and FiA that has jurisdiction (Article7).

<p><i>Who can fish under CFi scheme (who)</i></p>	<p>Sub-decree on CFis Management</p> <ul style="list-style-type: none"> CFi has rights to fish, do aquaculture, harvest, sell, and use all fisheries resources in accordance with the community fishing area agreement and management plan (Article 11). CFi members have right to fish at family-scale in accordance with the law, other regulations related to fisheries, and the by-laws of the CFis (Article 13). <p>CFi Internal Rules</p> <ul style="list-style-type: none"> Non-members can enter and fish in the community fishing area, but must inform the CFi committee and obey the community fishing area agreement , by-laws, internal rules, and community fishing area management plan (Article 8).
<p><i>Species and amount of fish catch allowed (how much)</i></p>	<p>Law on Fisheries</p> <ul style="list-style-type: none"> Transporting, processing, buying, selling, and stocking endangered fishery resources are permitted under permission (Article 23). Catching, selling, buying, stocking, and transporting fingerling or fish eggs and other aquatic animals' offspring or eggs are permitted under permission (Article 23). Buying or selling ornamental shells of rare species is permitted under permission (Article 23). Expanding farm lands or salt field in the fishery domains is permitted under permission (Article 23). It is a prohibition of commercial collection, transportation, and stocking of woods, firewood or charcoals of inundated and mangrove forest species (Article 28). It is a prohibition of the construction of kilns, handicraft places, processing places and all type of plants using raw materials of woods of inundated and mangrove forest species (Article 28).
<p><i>Fishing grounds where the users can go (where)</i></p>	<p>Law on Fisheries</p> <ul style="list-style-type: none"> Users can operate subsistence fishing at any time in the open access area and in the family-scale fishing areas, in freshwater fishing lots during the closed season or in marine fishery domains by using small-scale fishing gears (Article 31). In the Protected and Conservation Areas, any fishing activities are prohibited, except for special permission from MAFF to the FiA to conduct the fishery scientific, technical research and experiment (Article 19).

	<ul style="list-style-type: none"> • By pass navigations or any activities in the fisheries conservation areas are also banned, except competent officers in case of law enforcement (Article 19). • Sub-decree on CFis Management • CFi has rights to fish, do aquaculture, harvest, sell, and use all fisheries resources in accordance with the community fishing area agreement and management plan (Article 11). • CFi members have right to fish at family-scale in accordance with the law, other regulations related to fisheries, and the by-laws of the CFis (Article 13). <p>CFi Internal Rules</p> <ul style="list-style-type: none"> • Non-members can enter and fish in the community fishing area, but must inform the CFi committee and obey the community fishing area agreement, by-laws, internal rules, and community fishing area management plan (Article 8)
Types of fishing gears (how)	<p>Law on Fisheries</p> <ul style="list-style-type: none"> • It is a prohibition of all kind of fishing activities in the fishery domain by using the prohibited fishing gears including inter alia electrocute fishing gears, poisonous chemicals, explosives, pumping dry gears, spear in combination with projected light, gillnet or seine net with mesh size smaller than 1.5 cm, mosquito net, pair trawling nets, encircling net with light etc. (Article 20). • Fishing by gears namely Manh, Chon, Neam, Mong Krolok, Mong Os, Chhneang Os Leas/Kchao in inland fisheries, and Chhneang Os Kreng Chheam in coastal fisheries, which are dragged or pushed by engine power are permitted under permission (Article 23). <p>CFi Internal rules</p> <ul style="list-style-type: none"> • CFi members use family-scale fishing gears during open fishing season as its length, size, and number are specified in the community fishery internal rules (Article 6). • CFi members are not allowed to use forbidden gears, fish illegally, or clear forest or mangrove forest, or destroy coral or sea grass. They will be must be punished according to the Fisheries Law (Article 7).

	<ul style="list-style-type: none"> Non-members can enter and fish in the community fishing area, but must inform the CFi committee and obey the community fishing area agreement, by-laws, internal rules, and community fishing area management plan (Article 8)
<i>Period allowed in certain period (when)</i>	<p>Law on Fisheries</p> <ul style="list-style-type: none"> The closed season for middle-scale fishing is from 01 June to 30 September for the inland fishery domains located north of Tonle Chaktomok parallel and from 01 July to 31 October for the inland fishery domains located south of Tonle Chaktomok parallel (Article 16). Subsistence fishing can be operated at any time in the open access area and in the family-scale fishing areas, in freshwater fishing lots during the closed season or in marine fishery domains by using small-scale fishing gears (Article 31).
<i>Other activities that CFis are allowed to do and NOT allowed to do</i>	<p>Sub-decree on CFis Management</p> <ul style="list-style-type: none"> CFi has rights to fish, do aquaculture, harvest, sell, and use all fisheries resources in accordance with the community fishing area agreement and management plan (Article 11). CFi has no rights to sell, exchange, rent, donate, share, transfer the community fishing area divide, borrow, pawn, or at all and in any form (Article 12). CFi has no rights to erect dams or carry out fishing that obstructs the passage of streams, creeks, canals or fish migrations. This can be done only with the approval of the MAFF on the request of the central level FA, following consultation with relevant institutions (Article 12). CFi has no rights to divide and privatize the inundated forest and mangrove forest areas, flooded areas within the community fishing area approve by the MAFF the CFis to manage (Article 12). CFi has no rights to enter into any relevant agreements in the community fishing area with any physical persons or legal entities, even for the purpose of scientific research (Article 12).

	<p>Law on Fisheries</p> <ul style="list-style-type: none"> The CFi has no rights to sell, exchange, hire, donate or divide the community fishing area (Article 62). <p>Consultation Workshop on the Amendment of Sub-decree on CFis Management</p> <ul style="list-style-type: none"> Clear new right of CFi to do fishing, do aquaculture, harvest, process, sell, use and manage all fisheries resources and to promote ecotourism and other potential business in accordance with the community fishing area agreement and management plan (Article 11). CFi committee to exploit commercial fishing at a part of their CFi boundary in order to get benefit for implementation CFi management. In this case, CFi committee can make their request through provincial FiA (cantonment level) and central FiA (National Level) for getting approval from MAFF (New article 22).
Management Rights	Legal Framework
<i>Recognition of rights</i>	<p>Rights to use and manage fisheries resources are designed for users as well as managers and recognized in the Royal Decree on the Establishment of CFis, Sub-decree of Community Fisheries Management, Law on Fisheries, and annexes of the Prakas on the Community Fisheries Guidelines. Recognized rights to use are already mentioned above, but rights to manage fisheries are mentioned below:</p> <p>Royal Decree on the Establishment of CFis</p> <ul style="list-style-type: none"> The MAFF has general jurisdiction over management community fisheries (Article 1). Community fisheries shall have by-laws, internal regulations, management plans, maps of their community fishing areas and agreements recognized by the competent authorities (Article 2). <p>Law on Fisheries</p> <ul style="list-style-type: none"> The fishery management is under the jurisdiction of MAFF (Article 3). The FiA under the MAFF is responsible for the management of fisheries and fishery resources based on the National Fishery Policies and this law (Article 6).

- FiA plays role in law enforcement such as inspection, monitoring, surveillance and controlling of all fishery activities as being a judiciary police (Article 7).
- CFi is responsible to manage the community fishing areas in accordance with their community fishery management plan, procedure and guideline of community fishery (Article 62).
- The officers of the Fisheries Administration have the competence as a judiciary police officer in investigating the fishery offence and file a complaint to the competent tribunal. Investigating, controlling, preventing and protecting against fishery offence are the competence of the Fisheries Administration (Article 72).
- Local authorities, armed forces, custom, airport, port authorities, and other concerned authorities facilitate and provide forces to investigate, prevent and crack down on fisheries offences or temporarily keep all evidences of offence in case there is a proposition from the Fisheries Administration officer (Article 74).
- In case of the competent authorities mentioned in the above paragraph have found the actual fishery offences as below, the authorities:
 1. Immediately report to the nearest competent Fisheries Administration officer.
 2. Temporarily detain the suspect and evidence then send immediately to FiA who is habilitated as judiciary police officers to execute the law.
 3. Could neither directly fine nor seize evidence of the fishery offences (Article 74).

Sub-decree on CFi Management

- CFi has right to cooperate with the Fisheries Administration to suppress all fisheries violations in the community fishing area. In cases of urgency and need, the community fisheries can request intervention by nearby competent authorities to seize evidence of the fisheries violation and detain the offender then send him or her immediately to a Fisheries Administration competence to deal with the offense in accordance with the law;

	<ul style="list-style-type: none"> • CFi has rights to communicate with any other community fisheries, physical persons or legal entities for benefit of the community fisheries in accordance with all legal instruments that are in force; • CFi has rights to manage all fisheries resources in line with the community fishing area agreement and management plan (Article 11). • CFi has right to make a complaint or provide information on any problems which affect the interests of the community fisheries to the FiA, Commune/ Sangkat Council, and relevant agencies (Article 13). • Only the community fisheries committee has the right to apply to the FiA cantonment to request approval for a community fishing area agreement. They may request technical assistance from the FiA or an individual with skills in community fisheries management to formulate a draft of the community fishing area agreement (Article 21). <p>Community Fishery By-laws (Article 4)</p> <p>CFi members have rights to:</p> <ul style="list-style-type: none"> • Participate in the congress and vote equally; • Vote and stand as a candidate for election to the community fisheries committee in accordance with these by-laws and internal rules of the community fisheries • Receive information on the socio-economic status of the community fisheries from the community fisheries committee; • Request that an extraordinary congress be called in order to discuss and decide on any issue, if there is a request from at least one third of all the members of the community fisheries; • Participate in all activities of the community fisheries; • File complaints or provide information on any problems that impact on the interests of the community to Fisheries Administration officials, commune/sangkat councils, local authorities, and relevant officials; • Receive support from any sources for the benefit of the community.
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	<p>Community Fishery Internal rules (Article 4)</p> <ul style="list-style-type: none"> CFi committee have rights to punish CFi members (education, warning, suspend membership), bring conflicts to the congress to make decision, suspend fishing activities, make agreements with offenders that will stop their fishing activities, and report immediately to FiA in the case of fishing activities exceeding the size and number, or not of the type, time, or location, specified in the community fishing area management plan and agreement.
	<ul style="list-style-type: none"> Congress has rights to decide on dismissal of membership, compensation for damage to the prosperity of the community fisheries; decide on punishment of the committee, punish members or other individuals when the committee is unable to resolve the case. <p>Consultation workshop on the amendment of sub-decree on CFis management.</p> <ul style="list-style-type: none"> New rights are being developed, for example the CFi has right to protect not only inside their CFi boundary, but also the adjacent area outside the boundary (Article 11 of the sub-decree.), according to the consultation workshop on the amendment of sub-decree on CFis management.
<i>Choice of the rights</i>	Rights to fish folks are defined and mentioned above.
<i>Allocation of the rights</i>	Rights to use and manage fisheries are allocated to users, especially CFi members and non CFi members, and key managers, CFis and FiA based upon the above mentioned articles of relevant legal framework.
<i>Monitoring of rights</i>	Asserting existing rights are monitored by the responsible concerned stakeholders as described in the “Recognition of Rights”.

The Learning Institute is a non-profit, non-political Cambodian organization working with a wide range of civil society, public and private sector organizations so that they can contribute more effectively to the sustainable management of natural resources. In this way, it aims to alleviate poverty and to enhance the well being of people living in rural areas. Specifically, the Learning Institute acts as a centre of learning, working creatively with others to generate and share knowledge and practices that contribute to sustainable and fair use of natural resources.



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