

Promoting Effective Fisheries Co-management through the Community Fisheries in Cambodia

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In 2000, Cambodia formalized the cooperative arrangement between the government and local communities for the management of the fishery resources, resulting in the emergence of a concept which is known as Community Fisheries. As a policy of the government under this concept, fishing areas are allocated to the community fisheries for them to manage in a sustainable and equitable manner with the main purpose of alleviating poverty in fisheries communities. In view of the intensified promotion of its Community Fisheries, Cambodia had been identified as the Lead Country for fisheries management and decentralization under the Work Plan of the ASEAN Fisheries Consultative Forum for 2010 to 2012, with the main target of developing the country's national policy and program on the implementation of co-management based on the concept of Community Fisheries.

Cambodia covers an area of 181,035 km² and features a 435 km coastline along the Gulf of Thailand, with a water area of 4,869.84 km². About 30% of the country's land area is seasonally flooded making water, fisheries and forests the dominant features of the country. The Mekong River watershed which covers up to about 86% of the country's landmass, includes the Tonle Sap Great Lake one of the largest floodplain lakes and the most productive inland ecosystems in the world.

The fisheries sector of Cambodia encompasses extensively the inland capture fisheries in floodplains, rivers and lakes as well as rice field fisheries; marine capture fisheries operating mainly in the country's EEZ of about 55,600 km²; and some relatively small number of aquaculture activities. Fish production from inland capture fisheries of Cambodia

has been estimated to be between 230,000 and 400,000 metric tons per year, and in 2007 it accounted for about 21% of the total production of Southeast Asia from inland fisheries (SEAFDEC, 2010) and about 4% of the world's total production from inland capture fisheries.

Freshwater fisheries provide 75% of the protein requirement of Cambodians, which is estimated at 67 kg/person/year. Since more than 60% of the country's inland capture fish production is produced from the Tonle Sap Great Lake, it has been estimated that between one and three million people depend directly on Tonle Sap fisheries for their livelihood and food security. During the wet season, the Tonle Sap Great Lake increases in size by four times from 250,000 ha to about 1,000,000 ha, contributing to a network of wetlands which occupy up to 30% of the country's total land area, playing an important role in the economic, social and cultural life of the Cambodians. Moreover, the country's freshwater ecosystems host a high diversity of species, where it was reported that more than 500 species of freshwater fishes are present or are likely to be in existence in the Cambodian Mekong River while more than 700 species had been recorded in Cambodian freshwater fisheries (FishBase: November 2010).

On the other hand, the coastal zone of Cambodia supports diverse habitats including mangrove forests, coral reefs and sea grass beds, and marine habitats. These ecosystems are known to support more than 435 marine fish species from over 97 families including the globally endangered marine mammals such as dugong and marine dolphins (FishBase: November 2010). In 2008, the country's fish production from marine fisheries was 66,000 metric tons. Since aquaculture is a new economic venture in Cambodia, the country's fish production from aquaculture in 2008 was recorded at 39,700 metric tons (SEAFDEC, 2010).

Co-management in the Fisheries Sector

Co-management in the fisheries sector is a process of management in which the government shares power with the fishery resource users, and where the users are given specific rights and responsibilities relating to information, decision-making, and implementation of the fishery management activities. **Fig. 1** shows the interconnectivity of the various stakeholders in fisheries co-management in Cambodia.



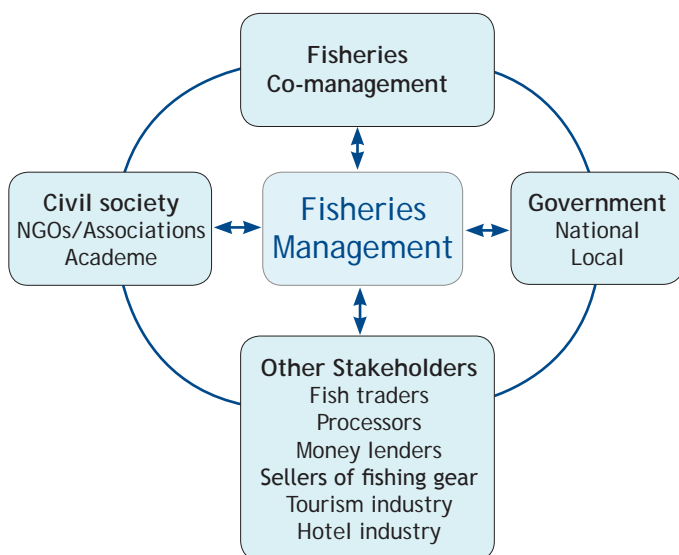


Fig. 1. Interconnectivity of the various stakeholders in fisheries co-management in Cambodia

Community Fisheries in Cambodia

In 2000, the Government of Cambodia through its Fisheries Administration (FiA) formerly the Department of Fisheries (DOF) reformed the fisheries policies of the whole country by empowering the local communities to manage their resources by themselves, which the government dubbed as “community fisheries” or CFs. As of 2006, there were 509 established CFs, 469 of which were inland CFs while the rest were coastal CFs (Serywath and Sy Vann, 2009). The main features of the CFs in Cambodia are shown in **Box 1**.

Box 1. Main features of the Community Fisheries (CF) in Cambodia

- CF is a cooperative arrangement between the government and local community in fisheries co-management
- CF is voluntarily formed by groups of people in one or more villages
- Government allocates fishing areas for the CF to manage in a sustainable and equitable manner in order to contribute to poverty alleviation
- Roles, rights and obligations of CFs and government are clearly defined in the Sub-decree on Community Fisheries Management
- CFs should be led by committees which develop their respective agreements and management plans, as well as implement their plans

Issues and Constraints of the Fisheries Sector of Cambodia

The Government of Cambodia has a policy that aims to centralize and commercialize the country’s fisheries resources. At the central level, the Fisheries Administration (FiA) formerly the country’s Fisheries Department, awards the concession rights to concerned communities for the use of the fishery resources including the country’s richest

fishery resource, the Tonle Sap Great Lake. The role of the FiA is mainly to enforce the law and facilitate the surveillance and control of fishing activities, including the issuance of fishing licenses as well as collection of fees and taxes from the stakeholders engaged in fishing activities.

Nevertheless, with the establishment of CFs in some areas, license fees were no longer required for medium-scale operations in inland fisheries and to some extent the license fees for some selected coastal fishing gears had also been reduced. The current Fisheries Law was promulgated in 1987 under the Socialist Government of Cambodia. Since then, privatization of the exploitation of fishery resources had been promoted, but enforcement and implementation of the law had been inadequate which could be because the provisions under the law are mainly copied from a 1956 decree, which has been considered obsolete especially in dealing with the rapid changes in fisheries in particular and in the country’s economy in general.

Such concern was also coupled by the fact that the enforcement of the country’s fishing law had been stymied by corruption and inadequate human and financial resources. As a result, uncontrolled fishing operations led to overfishing which has become a serious concern in recent years, considering that fish production had steadily decreased to an all time low.



Consultations conducted by FiA to disseminate the need to conserve the country’s fishery resources



Left: Reforestation of the flood forests; and Below: Mangrove reforestation



The large- and medium-scale fishers as well as small-scale family fishers operate under the extensive regulations enforced by FiA. However, since enforcement of the regulations in protecting the resources had been weak, over-fishing and illegal fishing practices continued to be practiced by the user groups in order to maximize their catch from the diminishing common resource pool.

Commercial fishing lot system had been in existence in Cambodia since about 1864, which initially received guidance and advice from the French protectorate authority. However, as the country's population grew at a very fast rate and with the natural resources starting to degrade, commercial pressure on the diminishing resources had a great impact on the livelihoods of the local people. The struggle for survival of the local fisherfolks led to serious conflicts with the fishing lot owners, as both parties compete for their respective fishing rights and interests. While the interest of local fisherfolks was mainly for survival, the interest of the fishing lot owners was to maximize profits that could be derived from their fishing operations. The mechanism of the Government did not seem to operate for the protection of the livelihoods of the local fisherfolk. As a matter of fact, the Fisheries Law may have been developed without taking into consideration the need to solve any such conflicts because the Law seems to focus mainly on protecting the interests of the fishing lot owners as major source of revenues for the national budget. Apart from the

various factors that affect the fishery resources leading to eminent decline, the country's population had also been fast increasing.

The population of Cambodia is reported to be 13 million of which 84% live in rural areas, and over 85% of the rural people depend directly on the diminishing natural fishery resources for their livelihoods and food security. Moreover, due to poor fishery resources management over-fishing became rampant while many fishers had been operating irresponsible fishing gear, while the people also continued to over-exploit the flood forests including cutting of trees and mangroves, mainly due to inadequate awareness on the need to conserve the resources and the absence of community fisheries law.

In addition to the unregulated use of natural resources, the overall fishery situation had worsened due to the impending dam construction in the upstream area of Mekong River System which could impact the fisheries and ecology of the Mekong River and especially that of the Tonle Sap Great Lake. In addressing the problems of depleting fishery resources and complete dependence of the various stakeholders particularly the country's poor rural population on these resources, the FiA had been exerting efforts to assist the rural people through the promotion of community development projects and activities including the reforestation of the flood forests and mangrove areas.

Effectiveness of Co-management in Community Fisheries

In order to address the aforementioned constraints, the concept of fisheries co-management had been promoted by FiA as a tool to improve fishery management. The approach appeared very promising since under the framework, the resource users at different levels would make their own decisions and take subsequent actions in safeguarding the fishery resources most especially the fish stocks for their own benefits. Moreover, expansion of the fishing lot system to include the floodplain habitats and prompting greater involvement of the fishing communities in management and operation of the fishing lots, were considered major strategies in the improvement of the fishery management.

Co-management is not a new concept in the history of Cambodian fisheries. During the socialist regime of the country, the people were organized to work together in groups known as solidarity groups or *Krom Samaki*. The activities of the fishing solidarity groups had some similarities with that of the concept of co-management. Nevertheless, experience had shown that this system did not work as there were allegedly some loopholes. Considering

that the key in the co-management of fisheries is in the sharing of power, responsibilities and benefits between the government and the concerned communities, during the socialist government of Cambodia it was impossible to ensure equal power, responsibilities and benefits between the grassroots and the government's higher authorities.

Nonetheless, in the late 1990s the concept of Community-based Natural Resources Management (CBNRM) was initiated by local NGOs working in local villages to improve the livelihoods of the communities and initiate natural resources management. This concept eventually led to the subsequent establishment of Community Fisheries (CFs) in some provinces located in the upper areas of the Mekong River with financial support from the Oxford Committee for Famine Relief-Great Britain (Oxfam GB) and Oxfam America starting in 1998. Later in 1999, CFs were established in Siem Reap Province with support from the Food and Agriculture Organization of the United Nations (FAO) and on the same year, the concept of community coastal resource management was initiated in the country's coastal areas with financial support from the Danish International Development Agency (DANIDA).

Prior to 2000, there was no law on community fisheries or specific legal framework that would involve the fisheries communities in the management of the fishery resources. Since the concept of CFs initiated by the NGOs was promoted with different guidelines depending on the experience and capability of the NGOs, the FiA strengthened the process of establishing community fisheries throughout the country taking into consideration the relevant provisions under the Fisheries Law which was promulgated in 1987.

When the Royal Government of Cambodia decided to reduce the concession fishing lots in late 2000s, to an area of about 538,522 ha or 56% of the total fishing lots, and released this area to the local people for small-scale fishing lot concessions, the FiA intensified the establishment of CFs throughout the country for both freshwater and coastal



Alternative livelihood in CFs: plastic pond culture of freshwater fish

areas. In promoting the CF concept, representatives from local communities, local authorities, local and international NGOs as well as government institutes had been actively involved in the preparation of the necessary legal documents such as CF guidelines, internal regulations, sub-decrees, by-laws, CF agreements, and CF management plans. As a result, from the total number of 509 CFs covering both inland and coastal fishery areas, 309 CFs had already their own regulations, 197 CFs had developed mapping systems, 58 CFs have their respective management plans, 142 have action plans, and 95 CFs had established fish sanctuaries and *refugia* systems (Serywath and Sy Vann, 2009; Ing Try *et al.*, 2010).

The methodologies for promoting CFs include building awareness and dissemination of the fisheries law and sub-decree on community fisheries which are necessary to ensure the sustainable utilization and management of the fisheries resources. Therefore, training sessions were conducted to develop the functional skills of the community members especially on financial management, administration, patrolling role, CF management, and on the advantages and aspects of conserving the fisheries resources, among others. Moreover, study tours were made part of the human capacity building especially for the CF members to enable them to learn lessons from the other CFs and exchange experiences on the important role of CFs in resources management for the development in their respective communities.



Demarcation of lots under the CF system

Box 2. Interventions of the Royal Government of Cambodia through the FiA to strengthen the CFs

- Preparation of the CF registration documents for submission to the Ministry of Agriculture, Forestry and Fisheries
- Demarcation of CF boundaries
- Preparation of CF fishing area management plan
- Implementation of alternative livelihood programs
- Stock enhancement through establishment of fish sanctuaries and artificial habitats
- Protection and reforestation of flood forests and mangrove areas
- Strengthening coordination and collaboration with key stakeholders, especially with the commune councils

Starting in 2007 and after CFs had been established in almost all the important fishing areas of the country, the Government of Cambodia focused its efforts in strengthening the capability of CFs in resources management considering that some CFs had not been functioning well, while some CFs still need support from the government to ensure their sustainability. In this regard, the government through the FiA continued to extend assistance and interventions for the development and strengthening of the CFs (Box 2).

Accomplishments of Fisheries Co-management in Community Fisheries

After the component gap in fisheries co-management of the CFs was addressed, the outcomes and accomplishments had

Box 3. Accomplishments of fisheries co-management in Community Fisheries

- Legal documents related to CF management are in place
- Management structures to support CFs had been subsequently established at the national level (Community Fisheries Development Department); the provincial level (Community Fisheries Development Units); and at the local level the members of the Community Fisheries Committee (CFC) had been elected
- Network to support CFs were established, namely: (i) Technical Working Group on Fisheries have been formed and functioning well; (ii) Local and International NGOs are strongly and actively supporting the activities of the CFs; (iii) Commune Councils closely cooperates with the CFs (where CF management plans had been integrated with commune development plans)
- Capacity of CF committees had been built through training, exchange visits, information dissemination, project demonstrations, and conduct of seminars
- Out of the total CFs established throughout the country, 236 CFs have been registered at the Ministry of Agriculture, Forestry and Forestry (MAFF) and the rest of the CFs are still in the process of preparing their registration documents and requirements

been positive as shown in Box 3. It should be noted that the CFs also played a significant role in the establishment and management of a *refugia* system for blood cockles for food security of the coastal fishers considering that blood cockle is one of the important economic commodities in the coastal areas of Cambodia (Ing Try *et al.*, 2010). Moreover, considering that the advantages of co-management focused on environmental protection as well as on social and economic gains for all concerned, certain positive changes had been brought about after the intensive promotion of co-management through the establishment of the CFs as shown in Box 4. Nevertheless, the sustainability of the CFs is still being confronted with various challenges as shown in Box 5.

Box 4. Positive changes brought about by the promotion of co-management in the CFs

- Awareness of the local people on the role of the CFs had been enhanced, thereby improving the participation of local people in resource management
- Collaboration between the CFC and the commune council is strengthened
- Access rights to fishery resources of CF members are more secured
- Flood forests and fisheries resources in the CF fishing areas are well protected
- Flood forests and mangrove areas are reforested
- Fisheries resources have increased in some CFs
- Alternative livelihoods of CF members are promoted and implemented

Box 5. Main challenges in the sustainability of Community Fisheries

- Most CFs still depend on external support
- CF Committee performs its role on a voluntary basis and there had been no regular incentives for its members
- There had been no proper source of income for the CF Committee to implement their activities
- Capacities of CF Committee are still limited and to some extent inadequate





Conclusion and Way Forward

The fishery resources in Cambodia had been decreasing year by year especially after the civil war that lasted for over twenty years and the rapid adoption of the free market economy in the 1990s. The factors that affected such decline included the country's increasing population, poor fisheries resources management, unregulated utilization and exploitation of the natural resources, and development of structures in the upstream part of the Mekong River System that had impacted on the fisheries and ecology of the Mekong River.

After the fisheries policy of Cambodia was reformed, and considering the enormous importance of fisheries resources to the country, effective fisheries co-management has been promoted through the establishment of Community Fisheries. The CFs had been promoted with the underlying objectives of improving governance and ensuring more equitable and sustainable allocation of the resources, with co-management in the fisheries sector playing an important role in the development and strengthening of the CFs. To date, 236 CFs had been registered with the Ministry of Agriculture, Forestry and Forestry (MAFF) and other CFs are still preparing for registration and are being assisted by the FiA to comply with the requirements because all CFs are supposed to have their respective legal CF management documents, management structures and networks to support their activities. Moreover, the capacity of CF committees is enhanced through human capacity development as well as information exchange and dissemination being promoted by the FiA. However, not all CFs are ready with all these requisites, therefore continuing assistance is necessary and should be urgently extended to them.

Moreover, as indicated in the AFCF Work Plan for 2010-2012, the government through the FiA has been expected to formalize the national policy on the implementation of fisheries co-management and decentralization approach.

Specifically, the country would pursue the task of developing and implementing relevant activities in support of the implementation of the national policy to promote fisheries co-management, and exchanging experiences with other ASEAN countries through workshops and seminars, especially the lessons learned by Cambodia in the implementation of fisheries co-management through the concept of Community Fisheries.

However, as mentioned in the foregoing Cambodia still needs support in terms of financial and human resources, to be able to conduct the activities related to the sustainability of the CFs and more particularly for undertaking the activities lined up under the AFCF Work Plan for 2010-2012. Nevertheless, recognizing that such activities would contribute to increased awareness of local people, increased local participation in resources management, better working relationship between CFs and government authorities, and sustainable conservation of fishery resources and habitats, FiA is intensifying its efforts to strengthen the role of CFs in fishery resources management which is the main requirements for the sustainability of the CFs and enhancement of livelihoods for the betterment of the local people especially those in the fisheries communities.

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