

# Coming Together to Fish

The Community Fisheries system, as practised in the Tonle Sap lake region of Cambodia, is now in need of better management options

The Tonle Sap is the largest freshwater lake in Southeast Asia. It is known for its unique flood pattern, which causes it to expand three to five times in area during the wet season, compared to the dry season. The increase in area causes flooded forests to be formed around the lake, which supports a high biodiversity of fish species. Some of this can be seen reflected in the wall reliefs carved in Bayon, in the world heritage site of the Angkor Wat temple complex.

Cambodian fisheries have developed by adapting to these

licensed according to gear. A closed season (from 1 June to 30 September) is observed in Tonle Sap to allow spawning of major fish species for large- and medium-scale fishing. Small-scale fishing is a free but gear restricted fishery that requires no licences and can be practised throughout the year.

On 16 August 2011, Prime Minister Hun Sen ordered the closure of the 35 fishing lots in Tonle Sap due to rampant illegal fishing activities in the area. According to newspaper reports, the government would consider reopening the fishing lots after three years. The closure took even the Fisheries Administration (FiA) officials and international fishery specialists by surprise.

Prior to the order, a notification letter dated 12 August 2011 states: “Areas have to be re-examined, studied and evaluated properly. Which fishing lots should be abolished? Which should be retained for exploitation? Which should be converted into conservation lots, in order to rehabilitate fish resources?”.

On 29 February 2012, *The Phnom Penh Post* newspaper reported that all 35 fishing lots in Tonle Sap were permanently closed. Overnight, a 100-year-old system of fishing lots disappeared from the lake. The fishing lots that were closed were converted into conservation areas and small-scale fishing grounds to be managed by Community Fisheries (CFi).

## Fisheries reform

During the first fisheries reform in 2000, 56 per cent (536,000 ha) of the fishing lot areas were released for small-scale fishers to reduce

unique ecosystems. Cambodia now produces approximately 400,000-500,000 tonnes of freshwater fish annually, which comprises 75 per cent of the total fishery production in the country. Around 82 per cent of the animal protein intake of Cambodians comes from fish and fishery products.

Cambodian inland fisheries are classified into three categories by the fishery law—large-, medium-, and small (family)-scale fishing, based on the purpose, type and size of fishing gears. While large- and medium-scale fishing is for commercial purposes, small-scale fishing is for subsistence. Large-scale fishing is a licensed fishery, based on the auction of demarcated areas called ‘fishing lots’, which were established in the 1880s. Medium-scale fishing is

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conflicts between the commercial fishing lot operators and small-scale fishers. To manage the areas released, the Cambodian government introduced a community-based resource management system in small-scale fishing through the CFI. A CFI is a group of people formed voluntarily to manage and conserve the fisheries resources in the area. The fishing lot areas released were handed over to the CFIs nearby as fishing grounds and their management transferred from the previous fishing lot owners. CFI areas offer free and open access and are not exclusive for the members; hence, outsiders, such as neighboring villagers, can also access the area, even as they visit other CFI areas for fishing. However, a CFI can set up its own rules and regulations that will control the fishing activity of both CFI members and non-CFI members in the fishing areas.

A Community Fisheries Development Office was established in 2001 under the Department of Fisheries (now, the FiA) to facilitate and co-ordinate CFIs. By 2005, 388 CFIs had been established.

During the second reform phase in 2011-2012, an additional 271,126 ha were transferred as CFI areas (177,881 ha) and conservation areas (93,245 ha) in and around Tonle Sap. By March 2015, there were 588 CFIs in Cambodia, the majority located around the lake. Since then, recognizing their importance CFIs have been developed and supported for the management of sustainable fishing in the area.

Based on interviews with CFIs in different areas since 2011, it can be seen that generally, the Prime Minister's order of 16 August 2011 was welcomed by the small-scale fishers because they thought they would have more access to better fishing grounds which they were previously unable to access.

However, in practice, actual access for new areas varied from one CFI to another. Those located close to the former fishing lot areas could get new CFI areas, while communities without any fishing lots did not. Also, the government

decision on transferring the areas as fishing grounds or as conservation areas led to differences among the CFIs.

The Phat Sanday CFI in Kampong Thom province, for instance, got four new areas after the second fisheries reform. Two were demarcated as residential, pass-through areas, where no fishing was allowed; one area was a conservation area where no activities are allowed; and the other area was separated into two parts, a fishing area and a conservation area. The CFI members complained that though the area expanded it could not be used as fishing grounds. Also, earlier, when the area was controlled by the fishing lot owner, people were able to negotiate to pass through the area, but when it was declared a conservation area, they were forced to take detours.

Opinions, however, differ. For example, in the Kampong Os CFI in the Kampong Chhnang province, the members said they were happy to be able to fish closer to the village than before. When the area was a fishing lot, people were wary of approaching the area for fear of conflicts with the owner.

With larger CFI areas, the responsibilities of management and conservation increase, and could prove to be a burden since they call

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Small-scale fishers at Tonle Sap, Cambodia. The closed fishing lots were converted into conservation areas and small-scale fishing grounds managed by CFI

for increased patrolling activities. CFI members are required to participate in patrolling even if their actual fishing grounds do not necessarily match the CFI area. Patrolling, therefore, calls for extra time and effort.

The frequency of patrolling varied among the CFIs, ranging from thrice a week to twice a month, depending on location and size of the conservation and fishing areas, and livelihoods and budget concerns. Apart from human-resource inputs, patrolling requires resources like boats, gasoline and mobile phones.

Though there are non-governmental organizations (NGOs) and international organizations supporting the CFI activities, they usually rely on project-based funding since it is difficult for CFIs to establish a sustainable self-funding system for patrolling. The lack of exclusive rights to CFI areas is also a disincentive against contributing resources.

**With the second phase of fisheries reform, Cambodia has displayed a vision of managing fisheries resources through CFIs.**

After the second phase of the fisheries policy reforms, which aimed to consolidate sustainable fisheries in the area and support the livelihoods of small-scale fishers, fishing gear restrictions were implemented more strictly than before. From 1987 until 2010, regardless of the development in fishing gear, type and size, restrictions were not updated. During the first reform phase in 2000, medium-scale fishing was exempted from licence fees and it was common for fishers to use medium-scale fishing gears for small-scale fishing, in the absence of regulation.

Once the second phase of reform was implemented, a new list of permissible fishing gears was announced in March 2012, which allowed 49 types fishing gear for the open season and 45 types for the closed season, up from 45 types listed by the 2010 proclamation.

Mostly, only small-scale fishing gear was allowed to be used in Tonle Sap.

Many fishers in the Phat Sanday CFI faced a problem since their major fishing gear was *lop lok*, an arrow-shaped bamboo fence contraption with a horizontal cylinder trap. This gear was classified as medium-scale fishing gear in the 2010 proclamation but it was not included in the 2012 list. Over 100 households in the Phat Sanday CFI borrowed between US\$2,000 and US\$5,000 to invest in fishing gear when they heard that the fishing lot had been regulated and would now be open only for small-scale fishers. Once they realized that *lop lok* was prohibited, they were left stranded. They claim that without using this particular gear, it is difficult to fish in their area. In early 2012, they collected signatures of over 900 households in the CFI and submitted a petition to the National Assembly, after which the government agreed to let them use the gear, provided its length was shorter than 50 m. Finding this inadequate, the fishers have again petitioned for the length regulation to be extended to 300 m. They did so by sending 600 signatures to the provincial governor in late 2012, and then, in 2013, another 600 signatures to the FiA. They hope that the length criterion will be changed to at least 150m.

With the second phase of fisheries reform, Cambodia has displayed a vision of managing fisheries resources through CFIs. Work on fisheries legislation and guidelines for small-scale fishing is under way, including ongoing discussions on conservation measures, and conflicts in water use among different sectors.

### **Family-based fishing**

Most small-scale fishing in Cambodia is family-based, with the fishers deciding on the type of gear and when and where to use them. Only with positive incentives can the fishers be expected to get more involved in the CFIs. There is an example of a successful community-based commercial fishery in the

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CFi members burning illegal fishing gears. CFI can set up its own rules and regulations that will control the fishing activity in the fishing areas

coastal area of Rayong, Thailand, which utilizes the stationary set-net gear. The effort has been supported by the government, and international organizations and researchers. The Rayong fishery has also introduced a co-operative selling system in which half the profits are taken by the community members as salaries, while the remaining profits are saved for the management costs of the set-net.

Such a system could be modified and applied in some parts of Tonle Sap. Not only would it allow for the collection of catch data and cover patrolling costs, it would also enhance awareness among fishers to conserve and manage the resource in their CFI area through control of the number and size of the gear, as well as the fishing effort.

Another option for managing the Tonle Sap fisheries resources is a 'pooling system', which is widely used in Japanese coastal fishing, where members of the group share the profits and costs of fishing operations. The landings of members are pooled and sales proceedings are divided equally among the members. Commonly, groups of fishers with similar interests in specific fishing gears or species are formed. A pooling system could help avoid excessive investment and competition, especially when fishing effort has to be limited. A lower

entry barrier at the initial stage could be important, since fishers are not familiar with collaborative fishing.

In Tonle Sap, there are also fishing communities outside CFIs, involved in seasonal fishing as migrant fishers. It is, therefore, necessary to maintain the CFI area as non-exclusive to ensure free access to small-scale fishing for these non-CFI fishers. A mechanism to avoid conflicts between CFI and non-CFI fishers is also indispensable. Collection of fishing fees or a subsidy for patrolling could also be explored.

Since factors like location, environmental conditions, fish species, access to markets and traders, and livelihood patterns and needs vary, each CFI needs a unique approach and goal. Considering the lack of a history of collaborative management, more practical examples of fishing regulations and fishery management systems from other parts of the world should be provided to encourage CFI activities. It is clearly time to offer Cambodia's CFIs management options alongside consultations of how the communities would like their future to evolve. 

#### For more

[www.academia.edu/8280340/Formulating\\_Cambodias\\_Small-Scale\\_Fisheries\\_Guidelines](http://www.academia.edu/8280340/Formulating_Cambodias_Small-Scale_Fisheries_Guidelines)

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