

## Fishing Reform and Community Fisheries: Fisheries Resource Management Trials in Cambodia

by Shingo Takahashi



The establishment in French colonial times of the fishing lot system was intended to ensure a stable source of tax revenues. The lot system was not established for the purpose of resource management and conservation, although lot fish production has shown to be stable, and since there is less fishing pressure, fish habitats were usually better conserved than outside the lot areas.

A priority in the ongoing fisheries reform is to improve the governance of the fishing lots system. The roots of this problem are many, and include the destruction of the social system during the civil war in the 1970s, the low educational level of government officials, a fragile law enforcement and monitoring system, and low wages, with many governmental workers earning only about USD 10-15 / month.

Conflicts over resource use have been spreading through the country, especially between subsistence fishers, who have been demanding more fishing areas, and concessionaires, who strictly exclude outside-access to secure maximum benefits from their assigned lot area. The reasons for the spread of these conflicts is complex. During the civil war, some fishing lots were given to the Khmer Rouges, who later sold the rights for their use

to local fishers. When Cambodia achieved greater social stability in the late 1990s, lot concessionaires started restoring their right to lot areas, causing much frustration to local fishers, who had been using the lot areas for the past two decades.

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The increasing occurrence of conflicts can also be attributed to the rapid increase in the population dependent on fisheries, including new entries from upland areas, as fishing is the easiest way for poor people to get daily food with little or no investment. Crop cultivation, by contrast, takes time and a level of investment before harvesting. Moreover, social stability has increased in Cambodia since a large number of fishing lots have been released to the public in an open access regime.

As mentioned earlier, the fishing lot owners can

## Introduction

As a SEAFDEC Member Country since 2001, Cambodia is now fully involved in the Centre's activities, cooperating with other Member Countries to promote sustainable use of regional fisheries resources. Cambodia was actively involved in the Millennium Conference in Bangkok in November 2001. Acknowledging the Resolution and Plan of Action, one of the major achievements of the Conference, Cambodia is notably dedicated to gradually introducing rights-based fisheries management systems for regulating access to fishery resources.

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One of the important initiatives undertaken by Cambodia to improve resource management has been the promotion of community fisheries. This initiative is part of a decentralization policy that aims to encourage the appropriate transfer of rights, authorities and responsibilities from central to local levels. Cambodia, through this trial, is expecting to place a certain measure of responsibility for resource management on local communities.

## The Cambodian fisheries reform

In the past, Cambodian people have been able to exploit abundant fisheries resources. However, natural fisheries resources are increasingly threatened, with fisheries production decreasing through over-exploitation, illegal fishing and habitat destruction (see Box 1). The conversion of inundated forests, which used to be seasonal fishing grounds during the flooding season, into agricultural land is aggravating the problem further. Moreover, conflicts over resource use among stakeholders are occurring ever more frequently. This situation has created a vicious circle, accelerating the further deterioration of natural resources and the frequency of conflicts.

Sustainable use of fisheries resources means ensuring their availability for future generations. To achieve this, it

is essential to introduce effective resource management systems, appropriate legal and institutional structures, and effective law enforcement and monitoring. These will be promoted through capacity building of both governmental agencies and the private sector.

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The government has also recognized that without the direct involvement and participation of local populations in the management system, conflicts among resource users will be further exacerbated while resource degradation cannot be contained.

In recognition of the increasing severity of conflicts between fishing lot concessionaires and local fishers, a fisheries reform was initiated in late 2000. Although progress has been difficult and slow, limited both in terms of financial, human and technological resources and by Cambodia's undeveloped basic infrastructures, the reform has led to several important measures being taken by the Department of Fisheries (MAFF 2001):

- Allocation of fishing lots (see Box 2), with about 56 % of all inland concession areas now released for use by local fishing communities
- Establishment of community fisheries. Although a supporting law has been drafted (a sub-decree for community fisheries), as of October 2003 it had not yet been finalized.
- Revision of the existing Fisheries Law, with the new law already having already successfully passed several consultations with stakeholders, and, as of November 2003, awaiting the approval of the Council of Ministers.
- Clear demarcation of resource conservation area and fish sanctuaries.
- Preparation of a Fisheries Master Plan and institutional strengthening. The Master Plan, which is to cover fisheries until 2020, is already drafted and waiting for the consultation process.
- Clarification of land use in the fisheries domain.
- Enforcement of the Fisheries Law, especially concerning illegal fishing.

## Cutback of fishing lots



**Box 1. Degradation of inland fisheries in Cambodia – What is happening?**

Cambodia's , freshwater fisheries are among the most productive in the world. Inland waters play an important role in the national economy and in people's livelihoods, providing abundant fish and fisheries products. Fish constitutes one of the most important elements in the diets of the rural people. Current consumption is about 30-40 kg per capita per year and more than 75 % of all animal protein is obtained from fish and fishery products. Inland waters are also the main source of drinking water, irrigation, waterway transportation and so on. The tremendous variety of rivers, lakes and wetlands in Cambodia supports a rich diversity of aquatic life, including more than 500 freshwater fish species. In recent years, the heavy fishing pressure (through over-exploitation, illegal fishing, habitat destruction, and conversion of inundated forest into agricultural fields) is threatening fisheries resources. Conflicts over resource use among stakeholders are occurring more and more frequently.



**Reasons for the degradation of fisheries resources**

**1. Destruction of flooded forests**

Destruction of flooded forest is an illegal activity. However, many people still cut and invade flooded forests to collect firewood and to create rice and bean farms. These activities lead to the destruction of fish habitats.



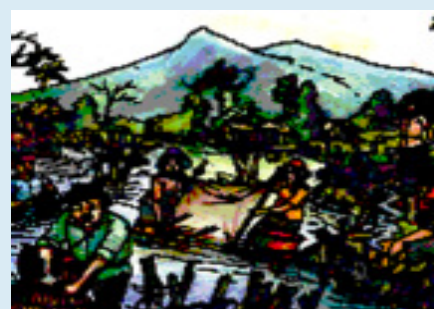
**2. Fishing by pumping water out of the pool**

Fishing by pumping water out of water pools is illegal. But some people still carry on this fishing practice without regard for the irreparable damage caused to natural resources. The activity catches larger fish but also destroys fingerlings, larvae and other aquatic organisms.



**3. Fishing using poison**

Fishing by using poison is prohibited by the Fishery Law. Fishers may catch more fish in a certain period using this method, but in the process they destroy fish habitats and other aquatic organisms. The toxins left in the fish body are also likely to be dangerous to the health of the consumer.



**4. Fishing by use of explosives**

The use of explosives for fishing is prohibited under the Fishery Law. Explosives not only destroy all natural resources and the environment, including fish habitats, but are also dangerous to the fishers themselves and to others people.

**5. Fishing using electric fishing gear and fine mesh nets**

Using electric fishing gear and fine mesh nets are prohibited under the Fishery Law. However, such practices are still commonly

carried out with no regard for their impact on natural resources and the environment. The practice kills all living organisms in the area, including fish fingerlings, larva, and other aquatic animals organisms. Fine mesh catches all juvenile fish, thus threatening the sustainability of a fishery resource. Some brood stock shocked by electricity, yet not captured, are rendered infertile by the use of electricity, and are no longer able to spawn.

**6. The destruction of fish habitats and illegal fishing**

Habitat destruction and illegal fishing are leading to the degradation of natural fisheries resources and the destruction of the environment. The repercussions will have severe long-term impacts on people's livelihoods and the national economy.

monopolize resources in the lot area. However, in earlier times, the relationship between local fishers and lot concessionaires was relatively good, with small-scale fishers often being given limited rights to enter the concession area for subsistence fishing. However, under increasingly heavy pressure from local fishers, fishing lot owners have become more vigilant in protecting their lots, sometimes even using hired armed guards. Indeed, several incidents have been reported in recent years of local fishers being shot dead or injured by lot guards while trespassing on closed lot areas.

**“a direct plea to the Prime Minister [...from fishermen...] prompted the Prime Minister to establish the Fishing Lot Reform, as a consequence of which the total fishing lot area was reduced by 56 %, or about 5,300 km<sup>2</sup>, to be utilized and managed by local communities”**

In mid 2000, groups of local fishers from the northern provinces came to the Phnom Penh, and made a direct plea to the Prime Minister for establish free fishing areas to ensure their livelihood. These actions prompted the Prime Minister to establish the Fishing Lot Reform, as a consequence of which the total fishing lot area was reduced by 56 %, or about 5,300 km<sup>2</sup>, to be utilized and managed by local communities. This sudden change in the management system has created a great deal of confusion for both government administration and local fishing communities during the 2001 season.

## **Development of community fisheries**

It is only half a decade since the concepts of ‘community fisheries’ or ‘community-based fisheries management’ were introduced to Cambodia. At the early stage, there were many trials to establish fisheries communities in the Tonle Sap region. However, without appropriate support from fisheries authority, most of these trials ended in failure.

The Fisheries Reform was initiated in late 2000, with the Community Fisheries Development Office (CFDO) established by the Department of Fisheries in February 2001. CFDO has a mandate to oversee the establishment, development and management of community fisheries throughout Cambodia by means of local participatory processes. The expectation is that with the establishment of community fisheries organizations, fisheries resources

will be managed efficiently, sustainably and equitably.

**“Yet the institutionalization of co-management schemes for fisheries faces various problems”**

As of 2002, some 265 community fisheries had been established in Cambodia in cooperation with provincial fishery offices, local authority, concerned community residents, and government and non-government organizations (NGOs). Yet the institutionalization of co-management schemes for fisheries faces various problems. These include the limited experience, resources, skills and capacity of staff in the Department of Fisheries. Nonetheless, the government plans to double the number of communities in the near future.

## **Prospects for community fisheries**

Most community fisheries stakeholders suffer from a lack of knowledge, understanding and skills to apprehend and undertake community fisheries management planning and implementation. But there is also low public awareness and understanding of the damage caused by the use of illegal fishing gear, such as electro fishing and fine mesh nets. There are several other obstacles to the establishment of community fisheries committees. These include:

- The very low educational level of the majority of local populations.
- The conservative nature of most fisheries communities, which tend towards tradition rather than adoption of new concepts.
- The practical difficulty of identifying members of communities based around flooding areas, because such communities move frequently with seasonal hydrologic fluctuations.
- The negative response by Khmer people to the concept of “community” because of the bad experience of socialist cooperatives during the Khmer Rouge period.

Community fisheries have been established in many developing countries during the past 20 years. Expectations have been immense, with community fisheries considered a potentially ideal system for resource management. However, in many cases, trials have not been successful. Failures have been attributed to a lack of understanding of the system, both on the part



of those responsible for its introduction and on the part of those responsible for its implementation. In many cases, community projects have focused on resource protection and conservation, but pay inadequate attention to other aspects, such as responding to the actual needs of livelihoods in local communities.



[...] in many cases, trials have not been successful”

Furthermore, motivation of people in communities has been poor; frequently, people do not understand why they have to be involved in community fisheries management. In the long run, communities will get benefits if a sound management system is introduced, but for those suffering from poverty and struggling to guarantee their daily food, there is a need for immediate benefits from the system. Unless these basic needs are met, it is understandable that they do not become involved in the co-management process. Another obstacle is that during the process of community establishment, local people behave as if they led by the government, rather than being themselves responsible.

In order to maintain functional communities, strong incentives to motivate community members are essential. During the process of organizing communities, more benefits oriented elements in the system need to be put into the system, notably by recognizing the community unit as a small business enterprise working in the fisheries sector. As such, the benefits will become the force driving communities to sustain and nurture the system.

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It is therefore necessary, at an early stage of community establishment, to obtain legal, administrative, technical and financial support from government authorities and donors. These must include effective implementation of programs to generate benefits, such as small-scale aquaculture, livestock, cash crop, and so on. These community livelihood ventures need to be well supported for a certain period of time by government and donors. They will also require:

- A soft loan system, established by international credit institutions, to support community enterprises
- Special laws, including a law on tax exemption for community enterprises
- Enhanced accountability and transparency of community management systems.

## Conclusion

Cambodia’s attempts at fisheries resource management by local communities have only just started. Key to their success is the empowerment of communities and building of their capability to undertake group-oriented action independently. If the reform process is successful, it will enhance the role of the fisheries sector in the country by contributing to employment, income generation, equitable distribution of wealth, food security, and poverty reduction. It will also ensure a firm structure of governance, backed up by a transparent and democratic process.

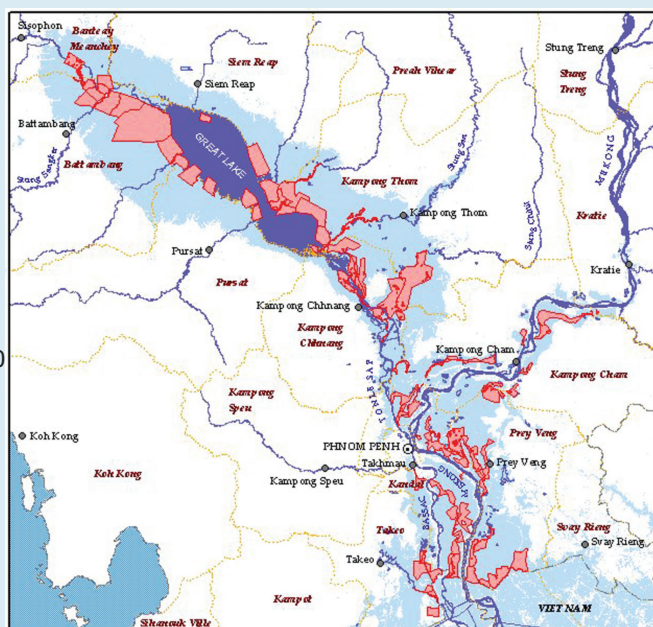
**Box 2. Fishing lots – A French legacy**

Freshwater fishing activities in Cambodia comprise three types of operations: large-scale commercial fishing, medium-scale licensed fishing, and small-scale family fishing. For more than a century, since French colonial times, the management system of commercial fisheries has been based upon the fishing concession system (known as 'fishing lots'). This system allows the private sector, through public auction, to get exclusive rights to exploit fisheries resources in an area designated by the government. Each fishing lot has a 'burden book,' in which the lot operations are defined, including details of operating seasons, location and extension of the fishing ground, type, number and frequency of fishing operations, and a schedule for pre-established payment installments.

The lot owners ('concessionaires') acquire rights to the exclusive exploitation of fisheries resources in the lot. Local fishers are not allowed to enter the lot to fish. The fee from the concession goes into the national treasury as a constant tax revenue. The mechanism enables efficient tax collection from each fishery company, and the government is able to place the responsibility for managing and conserving natural resources in the area on lot owners. The system was practiced for years as an ideal management system of fisheries.

In research into catch assessment by the MRC Management of Freshwater Capture Fisheries Project (1998), an estimate freshwater capture fisheries production was made, demonstrating the relative importance of small-scale fisheries.

Fishing Category	Estimated Production Range (tons)
<b>Large scale fisheries:</b>	
Fishing lots	30,000 - 60,000
Bag net lots	15,000 - 20,000
- Middle-scale fisheries:	85,000 - 100,000
<b>- Small-scale fisheries:</b>	
Family fishing	115,000 - 140,000
Rice field fishing	45,000 - 110,000,000
<b>Total freshwater production</b>	<b>290,000 - 430,000</b>



*Great Lake and Tonle Sap area in Cambodia, with old (2001) locations of fishing lots indicated in pink*

**About the author**

Mr. Shingo Takahashi is an expert in coastal fishing technology and resource management. He has work experience in various countries such as Africa, Middle East and Southeast Asia. He is currently working for the Department of Fisheries, Cambodia, wherein he provides counsel on fisheries policy planning and legislation reform. He also supports the Department in organizing various seminar/workshops on fisheries resource management, promotion of small-scale aquaculture, and development of community-based fisheries.