



ROLE OF WOMEN IN INLAND CAPTURE FISHERIES - A CASE STUDY OF FISHING LOTS IN THE GREAT LAKE

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Introduction

Inland capture fisheries in Cambodia is an important area in which women play a significant role. Thousands of women members within the farm households participate in catching and processing of fish in the floodplain fisheries as part of family fishing activity and in the commercial fishing, particularly in fishing lots. There are nearly 300 fishing lots located in the Great lake and major river systems of Cambodia, which produce nearly 60,000 metric tons of fish annually.

This paper describes the role of women in fishing lots by investigating a typical fishing lot located in the Pursat province in the Great lake. Fishing lot No. 7 is one of the 57 lots in and around the Great lake. It is located in Kampong Loung commune, Krokor district

in Pursat province. The lot is being leased out on a two yearly contract. The current lease value is 200 million riel (\$8,000). The leaseholder manages the fishing operation with the help of three partners and an work-force of 88 people consisting of both male and female laborers. Most of the laborers are members of families who have been working for the current leaseholder for the last seven years. At present 20 such families are working as the regular work-force in the fishing lot.

Almost all male and female members of the permanent fishing households participate through out fishing preparation (September-January) and fishing operations (February-May). Fishing preparation involves procurement of bamboo and cane materials for fishing fence and traps, construction of fence and traps, sewing and repair of

nets, repair of boats and establishment of seasonal fishing base near the site of the lot. Women play a significant role during this period by providing labor force for the construction bamboo fences, nets and fishing gear. The actual fishing starts in February after the fences and traps are placed all around the lot site, and fish catching continues until the end of May. From June to August, it is usually the off-season with no significant labor activity. Only the lot owner, the partners and master fishermen supervise the sale of fish kept in the cages. The ordinary workers, both men and women, look for alternative employment. Total fish harvest during the 1993-94 fishing season was 260 metric tons with an estimated value of 385 million riel (\$154,000).

The role of women.

Women play an important role in the operation of fishing in the lot. More than 40% of the work-force are women (Table 1). They are traditionally involved in the construction of bamboo fences and sewing and repair of nets prior to the start of fishing operation. During fishing operation a lot of women go with the fishing team in the lot site and

participate in fish handling, processing as well as cooking for the team.

Material and methods

One member from each of the eighteen families who have been working for fishing Lot No. 7 located in Pursat province in the Great Lake were interviewed. using a structured questionnaire, information regarding their household characteristics as well as their involvement in income generating activities were obtained .

Results and discussion

Distribution of labour-force

The total labour-force in fishing Lot No. 7 is about 88 and out of this 36(41%) are women (Table 1).

The labour-force is divided into 4 types:

- One master fisherman : He plays a significant role in finding out fish migration and assessing availability of fish . He also decides on time to catch fish

- Three technician : There are 69 ordinary workers engaged in different activities, namely fence making , nets sewing , boat repairing , setting up fence ,

catching fish , processing fish and cooking for the fishing team.

- Security guards: 15 men security guards are especially hired during fishing operation only, their role is patrolling and protecting lot from fishing poachers.

Marital status

Among 18 women in 18 families, there are 14 women who are married (78%), 3 women (17%) are divorced, and only one women is widow (Table 2).

Demographic characteristics of women workers

Among 18 women interviewed, the age ranged between 21-30 years for 9 people (50%), for 3 people it varied from 31-40 years (17%), between 41-50 there were 4 people (28%), and one woman was 51 years (6%) (Table 3). The age bracket of the majority of the Women (67%) was between 21-40 years.

Educational status

It is an undeniable fact that women workers are less educated: among 18 women workers there are 13 (72%) with no education while 2 (11%) can only

read, 3 others have (17%) completed primary education (Table 4).

Decision Making status in the family

Apart from the man, women can also make a decision for family. Among the 18 families there are 11 families (61%) headed by women (table 6).

Size of family

Size of the family varied greatly. There are 2 families with 2 people, 3 families with 3 people, 6 families with 4 people, 6 families with 4 people, 5 families with 5 people, 1 family has 7 people and another family has 8 people (table 7). The average size of the family is 4 .

Type of works in which women are engaged:

The majority of women are involved in fence making. We have seen during fishing preparation that there are 16 people (89%) make bamboo fence. 13 people (72%) continue the same work, during fishing operation. Only 1 person make fence making & net sewing and 1 person cook during fishing preparation.

During fishing operation, there are two women who process fish and 3 women (17%) cook and process the fish (Table 8). Generally, women work more than 10 hours a day. Among 18 women, 4 women (35%) spend 8-9 hours/day, 14 women (61%) women spend 10 and above (table 9).

Income of women workers

We looked into the income of the 18 women and among these, 5 women go to fishing lot during fishing operation they can earn an average income 528,000 riel/year. It covers 56% of the family, while 8 women stayed in the village with outside income during post-fishing operation. They can earn 326,000 riel and the last group stayed in the village with no outside income during post-fishing operation and such people can earn 288,000 riel (Table 11).

Gender participation in non-cash activities within the household

The result from survey conducted showed that almost women in 18 families is responsible to non cash activities within the household, while men were responsible

on some hard works, namely wood gathering, fetching water, etc. There are 89% women responsible on cleaning activities, 83% looked after children, 39% gathered water, and only 17% men fetched water.

Conclusion

Women play an important role in fishing lots, often contributing a higher amount of cash income to their families compared to other members. They also perform diverse non-cash activities within the household compared to their male counterparts. During the post-fishing season they have very little job opportunities. More jobs need to be created for women during this season. A lot of women can not take part in fish handling and processing at the lot site during fishing season because of their obligation to stay in the villages to look after their children and perform household duties. Efforts should be made through rural development programs to create more job opportunities for women to enable them earn stable income throughout the year.

Table 1. Distribution of labour-force in fishing lot No. 7, Pursat, 1993-94

Type of labor force	Male	Female	Total
Master fisherman	1		1
Technician/Skilled worker	3		3
Ordinary workers (a)	33	32	65
Cook		4	4
Security guards	15		15
Total	52	36	88
Percentage (%)	59	41	100

(a) The male workers are mainly fishing laborers, boat and net repairers and boat drivers; while female workers are mainly fence makers and fish processors.

Table 2. Distribution of female workers by marital status, Pursat, 1993-94

Status	Number	Percentage
Married	14	78
Divorced	3	17
Widow	1	6
Total	18	100

Table 3. Age distribution of women workers, fishing lot No.7 Pursat, 1993-94

Age group (years)	Number	Percentage
Up to 20	0	0
21 - 30	9	50
31 - 40	3	17
41 - 50	5	28
51 and above	1	6
Total	18	100

Table 4. Educational status of women workers, Pursat, 1993-94

Educational level (years)	Number	Percentage
No education (a)	13	72
Can read only	2	11
Primary	3	17
Total	18	100

(a) - Poverty was cited as the main reason for no chance of education

Table 5 Distribution of the women workers by education level of children in the family

Status	Number	Percentage
No schooling	15	83
Primary school	3	17
Total	18	100

Table 6. Distribution of women by head of family.

Status	Number	Percentage
Herself	11	61
Husband	7	39
Total	18	100

Table 7. Distribution of women workers by size of family.

Size of family	Number	Percentage
2	2	11
3	3	17
4	6	33
5	5	28
6	0	0
7	1	6
8	1	6
Total	18	100

Table 8. Distribution of women workers by type of work during different period.

Type of work	During fishing preparation		During fishing operation		During post-operation	
	No.	%	No.	%	No.	%
Only fence making	16	89	13	72	0	0
Fence making & net sewing	1	6	0	0		0
Only cooking	1	6	3	17	1	6
Cooking & processing	0	0	0	0		0
Only processing	0	0	2	11		0
Total	18	100	18	100	1	6

Table 9. Number of hours spent working for lot owner in different period during the year.

	During fishing preparation	During fishing operation	During post-operation
2-3 hours	0	0	18
4-5 hours	1	0	0
6-7 hours	0	0	0
8-9 hours	6	4	0
10 & above	11	14	0
Total	18	18	18

Table 10. Average income of women workers in different period during the year (Amount in riel)

	No	Period 1 preparation	Period 2 fishing	Period 3 post-fish	Total annual
Those who go to fishing lot	5	174000	298000	56000	528000
Those who stay in the village with outside income during post-fishing	8	139000	139000	48000	326000
Those who stay in the village with outside income during post-fishing	5	144000	144000	0	288000
Total	18	150000	184000	37000	371000

Table 11. Percentage contribution of women workers in the total family cash income.

	Percentage
Those who go to fishing lot	56
Those who stay in the village with have outside income during post-fishing	43
Those who stay in the village with no outside income during post-fishing	30
Total	129

Table 12 Gender participation in non-cash activities within the household.

	Female (%)	Male (%)
Cleaning/washing	89	0
Child care	83	0
Cooking for family	83	0
Fetching water	39	17
Wood gathering	0	39
Teaching children	6	0
Total	300	50

A STUDY ON THE ROLE OF WOMEN IN CAPTURE FISHERIES, KOMPOT PROVINCE

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Abstract

In all cases women contribute significantly to the fishery sector in Kampot province. They are not only represented in the traditional processing sectors but also in the actual fishing, once thought to be solely a male occupation. Women therefore have multiple roles-they provide family food security, prepare and cook food and look after the house and children. All but two of the households visited were involved in two main fishing activities - push netting at night for shrimp or crab catching during the day. Both of these activities take place in the coastal seagrass beds. Women involved in push netting ("Chhiup") were worse off financially (average income per year was 183.70\$) and socially (having to work throughout the night) than those involved in crab catching ("Chhmuork Kdam"). Women catching crabs earned a mean income of \$ 235,60 per year from fishing and had a more normal life as their activity took place during the day. Furthermore, push netting was a far more rigorous and dangerous activity. Women often cut their feet on razor shells in the grass and spent up to two or three hours at a time in the water.

Introduction

Kampot province is located in the south of Cambodia. Its southern border meets the Gulf of Thailand and its coastline is dotted with numerous fishing villages. The province is made up of 8 districts, has a total population of 446,067 and contains 84,888 families. 20,686 of these households are headed by single women with

children and more than 50% of the total population is under the age of 18 years old (UNDP/ILO, 1993). There are 3 coastal districts - Kampot town district, Kampot district and Kampong Trach district which borders Vietnam. The provincial seat of the province, Kampot town is situated on the coast and its surrounding area contains some

21,429 people Kampot province central market is also located in the provincial capital. In an effort to be better understanding the role of women in the capture fisheries of Kampot province. Women in development (WID) with the assistance of Australian People for Health, Education and Development Abroad (APHEDA) undertook a 2 week survey of 23 fishing households in three villages situated in Kampot town district and Kampot district.

Methodology

A questionnaire was designed by APHEDA and the survey was conducted by 4 WID staff over 10 days (17-19th and 20-26th Nov). The questionnaire was divided into 5 parts which included;

1) General household information (including number of children and educational status),

2) Household division of labor (functions performed and time spent/day on each task)

3) Decision making (who makes the decision and what types are important)

4) Household income and expenditure (costs and income) and

5) Marketing (sold locally and to whom).

Results obtained were analysed. Income data was transformed at an exchange rate of 2500 riels/USD. Data was compared by sorting variables such as age (Table 1) and income derived by fishing method (Table 2). As the majority of households were involved in either crab catching (n=9) or push netting (n=12) the remaining two fishing activities (throw net and crab cage) have been excluded form the results and discussion.

Results

Household information

The average age of the 23 women interviewed was 40 years (see Table 1). 13 women were married and 10 were widowed (mainly in Daun Toak village). All widows were head of the household but not all married households had men as the head. 4 of the 13 married households had women (30.8%) in charge, probably due to the inability of the man to provide any income. 60.9% of all the households interviewed were headed by women. The overall educational status of women, generally, in these households was very poor - 17 of the 23 women were illiterate (74%). The remaining 6 women had only reached primary and secondary levels. Women older than 40 years (n=12) were more illiterate (91.7%) as

compared to 45.5% of women in the less than 40 years age group (n=11) (Table 1). The average number of children per household was 2.6 - 95% of children from all households were under 18 years of age. Women older than 40 years had nearly twice as many children (n=38) as those of 40 years old and younger (n=22).

Division of labor

In all the households interviewed women were expected to not only to provide food security but cook, clean the house and look after the children. Women complained that they did not get enough time to rest each day due to the multiple roles they had to perform within the family. In all situations the male had more spare time than the female. Even when the male was required to carry out alternative tasks these were often less strenuous than the women's (i.e. tending the animals). The daily routine for women involved in push netting and crab catching are summarized in Table 3.

Decision making

In married households the final decision regarding the family was not always made by the head of the family, it was sometimes made jointly with the partner (1 in

4 female headed households and 3 in 9 male headed households). In the remaining 9 households where the head of the family made the final decision it was only after discussing it with the partner. Though older children often joined widows in decision making, final decision was always made by widows..

Household income

Fishing supplied at least 60% of all household income per year (see Table 2). Other sources of income were obtained from either selling excess rice, tending/selling livestock and from work (probably laboring) outside the village. Women involved in push netting (n=9) earned less per year than those involved in crab catching (n=12). They had a mean income per year of \$183.70 compared to those catching crabs who earned \$235.60 per year. However, seven of the nine crab catching households in Daun Toak village had no other income source. This probably reflects the high percentage of widows interviewed in Daun Toak village. In contrast ten of the 12 push netting households had at least 1 or 2 other income sources. These other income sources, however, did not contribute significantly to the household income. Push netting households with two other income sources (n=5) earned only

slightly more than a household surviving solely (n=7) on catching crabs (a mean of \$259/year compared \$ 248/year).

Marketing

Crab meat is sorted into three quality categories (claw, body and leg meat) and sold to the village middleman. He pays 6,000 riels/kg(approx. \$2.40) irrespective of the quality categories which seems unfair. Furthermore, he also reduces this price if households have no high quality claw meat available. The middleman then sells it to the processor/distributor in Kampot town who sells the meat in Thailand. Claw meat is in the highest demand. The processor/distributor also employs women for value adding. They make crab/prawn sticks which are then deep fried and sold in Phnom Penh. This whole process, from catching, cooking, peeling, sorting and value adding is reliant on women. In contrast, the shrimp obtained from push netting is either sold directly by the family at small local markets or to the local middleman who sells it at the main provincial market. The shrimp are boiled, dried in the sun, placed in a bag and beaten to remove the shell. All this work, including the selling is done by women. The women also make a paste by grinding up the smaller shrimp.

Discussion

The main objective of this study was to gain some insight into the role of women in coastal capture fisheries. Additionally, this study has also highlighted the status of women more generally. The most striking example of this is education or more precisely the lack of it - 74% of the women (17 of the 23) interviewed were illiterate (Table 1). Furthermore, women were expected to perform multiple tasks within the family unit - provide family food security, prepare and cook food and look after the house and children. Many had little or no time to themselves and complained of lack of sleep due to overwork. The majority of women interviewed were involved in either crab catching or shrimp push netting. Women involved in shrimp push netting worked physically harder and longer hours and made less money than those catching crabs. They also had to travel and work at night which is more dangerous. Their feet were often cut while push netting in the seagrass. Women catching crabs were better off as they worked from a boat during the day and returned to their family at night. It seems unfair that only one price is available and not three depending on whether leg, body and claw meat is sold. A women's cooperative could overcome these problems

by selling directly to the processor and thereby removing the middlemen. Finally, the significant contribution of women in capture fisheries and family food security needs to be

fully acknowledged on a national scale in Cambodia and discrimination, especially in education, discouraged and readdressed.

Table 1. Summary of general household information

(Data sorted into 2 groups: Women under and including 40 years old and those above 40 years old)

Village	Fishing activity	Family Name	Sex	Age	Marital status	Head of Family	Education	No. of child	<18 years
Tolung Thngay	Push net	Uk Ro Har	F	22	M	No	Primary (2)	2	2
Trapaing Sangker	Push net	Um Bun Thocun	F	25	M	No	Primary (4)	1	1
Trapaing Sangker	Push net	Eng chhoeun	F	25	M	No	Illiterate	2	2
Trapaing Sangker	Push net	Yee Vany	F	25	M	No	Illiterate	0	0
Tolung Thngay	Push net	Touch Meng	F	29	M	Yes	Illiterate	2	2
Tolung Thngay	Push net	If Vanny	F	33	M	Yes	Illiterate	1	1
Trapaing Sangker	Push net	Pao Yoeun	F	33	M	No	Secondary (7)	4	4
Tolung Thngay	Push net	Sin Savy	F	37	W	Yes	Illiterate	2	2
Daun Toak	Crab lift net	Mam Ty	F	39	W	Yes	Secondary (8)	2	2
Daun Toak	Crab lift net	Los Matt	F	39	M	No	Secondary (8)	2	2
Trapaing Sangker	Push net	Tann Houn	F	40	M	No	Illiterate	4	4
Tolung Thngay	Drum crab trap	El Non	F	41	M	Yes	Illiterate	6	6
Tolung Thngay	Push net	If Roeun	F	41	W	Yes	Illiterate	2	2
Daun Toak	Throw net	Ngout Matt	F	42	M	No	Illiterate	5	5
Tolung Thngay	Push net	Sarm So Phart	F	44	M	Yes	Illiterate	7	7
Daun Toak	Crab lift net	Sa Vy	F	45	W	Yes	Primary (3)	3	3
Daun Toak	Crab lift net	Neak Mum	F	45	W	Yes	Illiterate	1	1
Tolung Thngay	Push net	Sim Yas	F	50	W	Yes	Illiterate	3	3
Daun Toak	Crab lift net	Sou Dam	F	50	M	No	Illiterate	1	1
Daun Toak	Crab lift net	Mole Sea Yas	F	51	W	Yes	Illiterate	4	1
Daun Toak	Crab lift net	Nget Tes	F	54	W	Yes	Illiterate	2	2
Daun Toak	Crab lift net	Sok Mok	F	55	W	Yes	Illiterate	1	1
Daun Toak	Crab lift net	Matt Yai	F	55	W	Yes	Illiterate	3	3

Table 2. Summary of yearly fishing income

(Data sorted to compare incoc (US dollars) from different fishing activities)

Village	Fishing activity	Family name	Head of family	Marital status	# Income sources	Income form fishing/Yr.	% form fishing
Duan Toak	Crab lift net	Mrm Ty	Yes	Widow	1	216	100
Duan Toak	Crab lift net	Na Vy	Yes	Widow	1	201.6	100
Duan Toak	Crab lift net	Neak Mum	Yes	Widow	1	230.4	100
Duan Toak	Crab lift net	Nget Tes	Yes	Widow	1	432	100
Duan Toak	Crab lift net	Sok Mok	Yes	Widow	1	152	100
Duan Toak	Crab lift net	Mltt Yai	Yes	Widow	1	216	100
Duan Toak	Crab lift net	Los Matt	No	Married	1	288	100
Duan Toak	Crab lift net	Mote Sea Yas	Yes	Widow	2	212	89.83
Duan Toak	Crab lift net	Sou dam	No	Married	2	172.8	92.31
Trapaing Sangker	Shrimp push net	Um Bun Thoeun	No	Married	1	172.8	100
Trapaing Sangker	Shrimp push net	Eng Chhoeun	No	Married	1	187.2	100
Trapaing Sangker	Shrimp push net	Yee Vany	No	Married	2	216	88.52
Tolung Thngay	Shrimp push net	Sin Savy	Yes	Widow	2	144	78.26
Tolung Thngay	Shrimp push net	It Roeun	Yes	Widow	2	144	81.82
Tolung Thngay	Shrimp push net	Touch Meng	Yes	Married	2	208	81.25
Tolung Thngay	Shrimp push net	It Vanny	Yes	Married	2	216	81.82
Tolung Thngay	Shrimp push net	Sim Yas	Yes	Widow	3	180	77.59
Trapaing Sangker	Shrimp push net	Sarm So Phart	Yes	Married	3	216	64.28
Trapaing Sangker	Shrimp push net	Pao Yoeun	No	Married	3	144	83.72
Trapaing Sangker	Shrimp push net	Tann Houn	No	Married	3	288	79.12
Tolung Thngay	Shrimp push net	Uk Ro Har	No	Married	3	88	45.83

Note: Drum crab trap and throw net excluded form analysis

Table 3. Daily routine for women involved in push netting and crab catching in Kampot Province.

Crab catching	Push netting
3 AM: Rise to cook rice and pack other food for eating while at sea.	3 PM: Prepare tools (torch lamp, fish cage and push net) as well as cooking rice, water and feed animals, tell children to take care of house
4 AM: Leave home for sea	4 PM: Leave home for sea
5.30 AM: Reach the sea at dawn and set crab nets in water for 1/2 hour before returning to pull them up.	6 PM: Arrive at fishing place at low tide, tie lamp torch around neck, fish cage to hip and place net in the water. Begin pushing
3 PM: Return home and boil crab catch immediately	
4 PM: Peel crab shells and sort meat into 3 quality categories and sell to village middlemen	Push net for 200-300mt at one time, collect catch and place in fish cage attached to hip. Women push for 2-3 hours without rest.
5 PM: Go to buy trash fish for next day operation using as bait	3 AM: Finish push netting and head home
6 PM: Prepare house and cook meal for family	6AM: Arrive home and immediately prepare catch for selling at market