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<u>Glossary</u>

Acronyms and terms

· · J	
EU	: European Union
INCO	: International Scientific Cooperation Projects
PAPUSSA	: Production in Aquatic Peri-urban Systems in Southeast Asia
PCA	: Participatory Community Assessment
RUA	: Royal University of Agriculture (RUA), Cambodia

Table of Contents

 Glossary Table of Content List of Tables List of Figures Summary 	iii iv v vi vii
I. INTRODUCTION	1
II. METHODOLOGY	3
2.1. Structure of the PCA	3
III. RESULT	5
 3.1. Physical Characteristics of the Community and Resources Systems - 3.1.1. Community Map	5 5 8 11 11 13 13 15 15
3.3.4. Food Consumption and Sources	
3.4. Problem Ranking	
IV. Conclusions	21
V. Recommendations	21
Reference	

Appendix

List of Tables

Table 2.1: Schedule of the PCA Activities 3
Table 3.1: Socio/Wealth Ranking in Duong Village
Table 3.2: Seasonal Calendar (Men's group)
Table 3.3: Seasonal Calendar (Women's group)
Table 3.4: Food Consumption (Men's group) 17
Table 3.5: Food Consumption (Woman's group) 18
Table 3.6: Activities Matrix of Women
Table 3.7: Activities Matrix of Men 20
Table 3.8: Activities Matrix of Children 20
Table 3.9: Problem Ranking in Duong Village 21

List of Figures

- Figure 3.1 : Community Map in Duong Village
- Figure 3.2 : Resource mapping in Duong Village (Women's group)
- Figure 3.3 : Resource mapping in Duong Village (Men's group
- Figure 3.4 : Diagrams of Timeline (Men's group)
- Figure 3.5 : Diagrams of Timeline (Woman's group)
- Figure 3.6 : Wealth Ranking Percentages in Duong Village

Summary

Participatory community assessment (PCA) plays an important part in Work Package1 of PAPUSSA. Its major objective is to describe the livelihoods, character, history, resources and problems of specific communities to be chosen for succeeding work packages. The PCA in Duong village was conducted between 21-25th October 2003 and had 22 participants involving fishermen, fish farmers, fish traders, sellers and consumers.

10% of those people in the community belong to the rich category, 20% average, 50% poor, and 20 % of very poor people. The income of people in the community is generally very limited and the people feel that theft is their main problem when their implements, livestock and fish are stolen. Other problems faced by the community are boat tax, lack of investment, decrease in fish catch and health problems.

I. Introduction

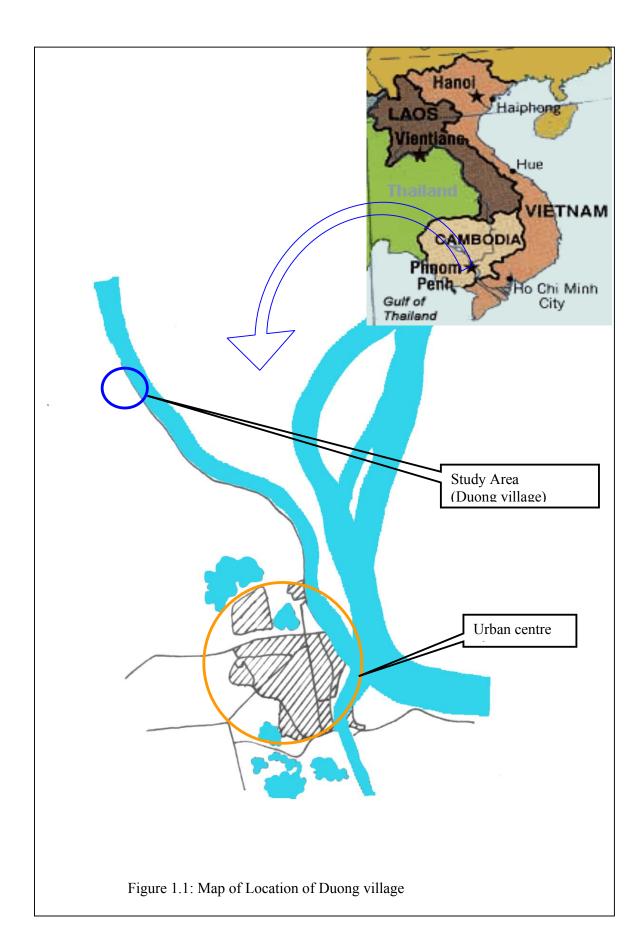
Production in Aquatic Food Peri-urban Systems in Southeast Asia (PAPUSSA) is a collaborative research project between European and Asian partners; started in January 2003 and is going to continue for 3 years. The overall objective is to understand the aquatic production in and around Hanoi and Ho Chi Min City in Vietnam, Phnom Penh in Cambodia, and Bangkok in Thailand.

Doung village, located in Prek Phnauv Commune, Por Gneiloeu District, Kandal Province is identified as a community in peri-urban of Phnom Penh City which it is selected for Participatory Community Appraisal (PCA). Situated to the north of the city, the village is close to the Tonle Sap River where aquaculture production is dependent on river water. There are 13 groups and 451 families with 3 different ethnic groups in the village; Khmer (173 HHs), Muslims (177 HHs) and Vietnamese (101 HHs). Table 1.1 shows the distribution of these various ethnic groups (Source: *Statistics in Duong Village*)

Objectives of the PCA

The principal objectives of the PCA are:

- To identify well a defined community and get an overall view of peoples livelihoods, environment, history, and socio-economic structure;
- To identify the problems and constraints of the community and relate them to their livelihoods and peri-urban aquatic production systems; and
- To identify strategies or recommendations for future interventions.



II. METHODOLOGY

2.1. Structure of the PCA

The PCA was conducted in 5 days, starting from the 21st to 25th October 2003.

The PCA Process

Before the actual PCA was carried out, following need to be done the team from RUA were involved in:

- Assigning tasks and responsibilities to members of the team;
- Selecting and visiting the community;
- Introducing the objective of the activity and the project to key informants;
- Identifying participants;
- Finalizing the date and location of the PCA;
- Organizing the schedule of the PCA,
- Preparing the materials; and
- Preparing gifts and tokens.

The PCA process was done in 4 stages. **Stage 1** began on day 1 with the teams meeting the participants to introduce the team and objectives of the activities. **Stage 2**, activities were carried out during days 1, 2 and 3 with the implementation of the following tools:

- Community mapping
- Wealth/ socio-economic ranking
- Seasonal calendar
- Activities matrix (male, female, and children)
- Timelines
- Food consumption
- Resource mapping
- Problem/constraint ranking.

Stage 3, was conducted in days 3 and 4. Our working team analyzed and summarized what had been done. **Stage 4** was done in day 5 with a feed backing of our findings to the community and giving them the opportunity to validate the results of the PCA. During this stage also plans for the future of the project were discussed.

	Day 1										
Time	Actors	Activities	Others								
8:00-8:30	Team leader	 To introduce himself and numbers of team working To explain the project To explain objectives and activities of the PCA 									
8:30-11:30	Working team and participants	-Community mapping -Wealth/socio-economic ranking									
11:00-12:30	_	-Lunch									
13:00-15:00	-	-Seasonal calendar -Activities matrix									
15:00-16:30	Participants	-To present what was done with above tools									

Table 2.1: Schedule of the PCA Activities

		Day 2								
8:00-11:30	Working team and	-Timeline								
	participants	-Food consumption								
11:30-12:30	-	-Lunch								
13:00-15:00	-	-Resource mapping								
	-Problems/contains ranking									
15:00-16:30	Participants	-To present what was done with above tools								
Day 3										
8:30-12:00	Working team	-To analyse and produce summary								
12:00-13:00	-	-Lunch								
13:00-16:00	-	-To analyse and produce summary								
		Day 4								
8:30-12:00	Working team	-To analyse and produce summary								
12:00-13:00	-	-Lunch								
13:00-16:00	-	-To analyse and produce summary								
		Day 5								
8:00-11:30	Working team and	-To present back to the participants what was								
	participants	done with above tools in the last 3 days								
		-General discussion								
		-To celebrate and close the PCA								

III. RESULT

3.1. Physical Characteristics of the community and Resource Systems

3.1.1. Community Map

To draw the community map, participants were divided into 2 groups based on gender. Before they drew it, the facilitator in each of the groups explained the activity. The outcomes of the activity were the same for both the male and female groups. Therefore, we decided to choose only one community map of the male group to present in this report.

Their community map showed that the 5th national road runs through the village. The village is bordered to the east by the Tonle Sap River, to the north with the Krosh village in Somroung Commune, and to the west by Boeung Samroung village. Within the boundaries of the village there are gas stations, houses, a primary school, stores (rice and fertilizer), a market, pagodas (Muslim and Vietnamese pagodas), small roads, factories and ponds for fish culture and cage culture in the river (Figure 3.1)

3.1.2. Seasonal, Weather and Climatic Events

Like the rest of the country, the village has 2 seasons: dry and rainy seasons (wet season). The dry season is normally from December to April. The rainy season begins in August and ends in November. Flooding normally occurs in July to September.

3.1.3. Production and Fish disease

There are different types of food production systems in the village including vegetable and animal production. Importantly, we focus on aquatic plants (water lily, mimosa, lotus, and morning glory and animals (e.g. pangasius, walking catfish, and big snakehead), which are either cultured or harvested from the wild.

Wild harvesting of fish may be done in the Tonle Sap River or the Boeung Somuoung. These fish caught may either be sold to the markets or used for household consumption.

Many farmers in the village raise fish in ponds and cages in the Tonle Sap River especially pangasius, walking catfish and big snakehead. Cultured fish are usually sold to the collectors, who, in turn, sell on to other locations. When diseases strike in fish culture systems treatment may be done but some farmers do not because they lack the technique to identify different kinds of disease and also find it difficult to purchase the appropriate and effective medicines to treat them with in Cambodia.

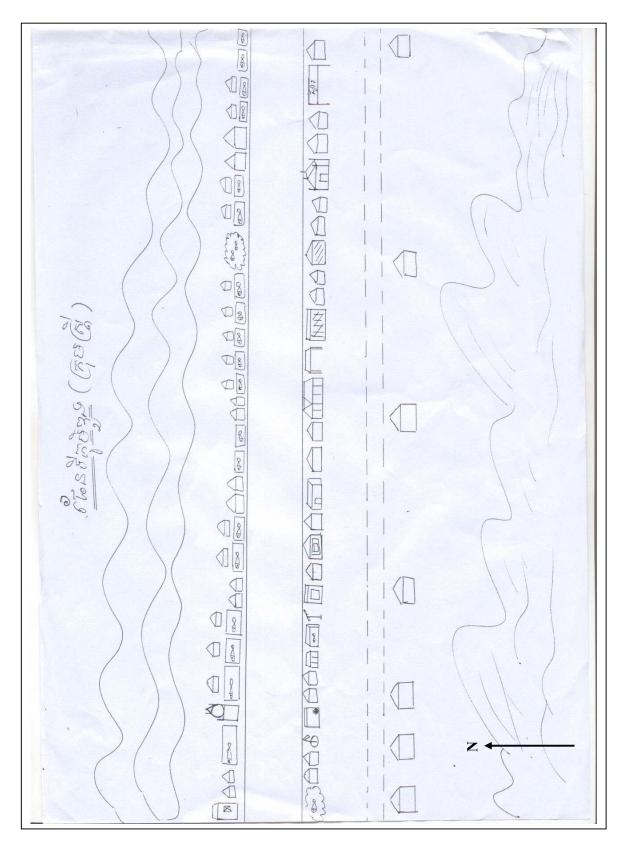


Figure 3.1: Community Mapping in Duong Village (Womens group)

		P	
	<u>Note</u> :		
Nationa	al road		
Path	Ť	Rice depot	
House		Food store	
Pond	117	Bean sauce man	1u.
Muslim J	pagoda	Wood manu.	
Fish loa	ading		
Petrol s	station	Vietnamese ten	nple
\bigcirc	10 ₁₂ ×	Market	
Fertiliz	er store		
Rest ha			River
	sauce ufacture		Boeng Somrong Lake
TV a	intenna		
TV a	ntenna		
Ice ma	cube nufacture		
Fis	heies		
			and the

3.1.4. Resource mapping

To carry out resource mapping, participants were divided into 2 groups based on gender. Before they began, the facilitator in each group explained the process of drawing. The outcomes of the activity were the same for both the male and female groups. Therefore, we decided to choose only resource mapping of the male group to present in this report. The resources mapping was as following:

- In Somroung Lake: There are different kinds of fish and aquatic plants. To catch them, people in the community used fishing gear such as net, line, cylinder trap and handle scoop net. These tools are bought from the market. For aquatic plant harvesting, they used knife, boat and other tools. They take some of their product as daily food demand and bring some to sell in markets. They can catch 2-4 kg of fish per day and take about 0.5-1kg for daily consumption and sell the remaining to the market. They collect aquatic plants from wild in small amounts, for example, root of lotus is collected 8-10 bunch to sell to market and take 1 bunch for their own household consumption.
- In Tonle Sap River: There are different kinds of fish such as *Henicorhynchus caudimaculatus*, Spot pangasius, Redtail catfish, *Cirrhinus microlepis*, Pangasius, *Oxygaster anomalura*, and aquatic plants. The fishing gears they use are bought from the market. They can catch 4-7 kg of fish per day, which they take about 0.5-1 kg for home consumption, and sell the remaining to market. Moreover, fishermen can collect trash fish from the Tonle Sap River which are then used as an ingredient for local feed used in aquaculture.
- In Fish Culture: Fish culture in ponds is popular in this community. They prefer pangasius, walking catfish, and big snakehead. Some fish culture is in cages. Different inputs are need for fish culture such as feed, ponds, and cages, water, fishing gears, medicine, machinery and others. For fish feed, farmers can buy a lot of trash fish from the Tonle Sap River and rice bran from market to feed their fish in ponds and cages. Fish products are sold directly to the collectors or middlemen in Phnom Penh, Kompong Cham, Kompong Speu and other provinces.

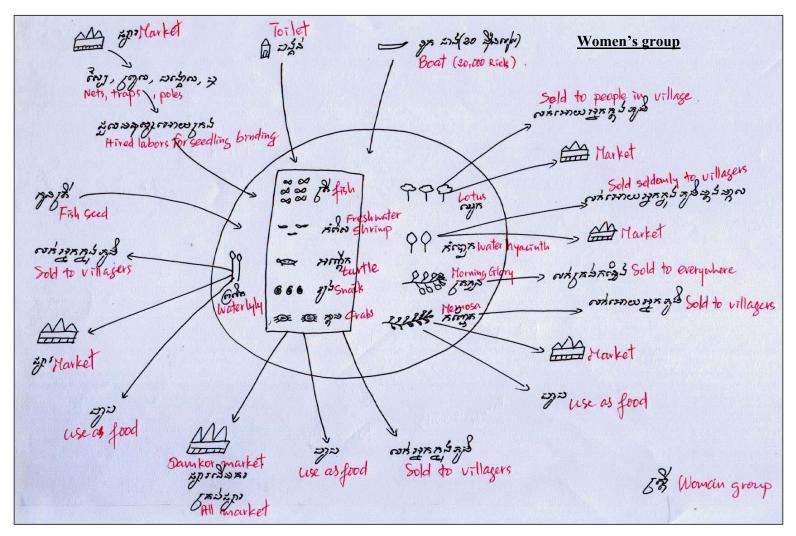


Figure 3.2: Resource mapping in Duong Village (Women's group)

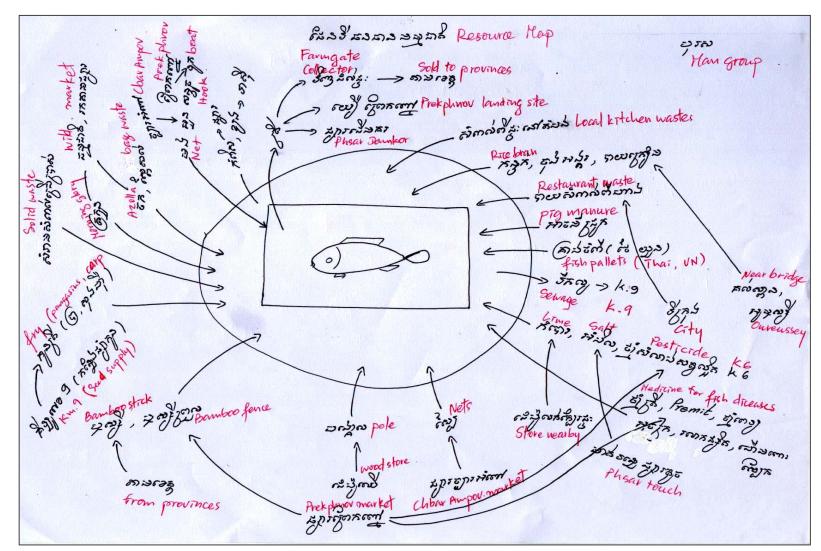


Figure 3.3: Resource mapping in Duong Village (Men's group)

3.2 Historical Profile of the Community

3.2.1. Description of Timeline

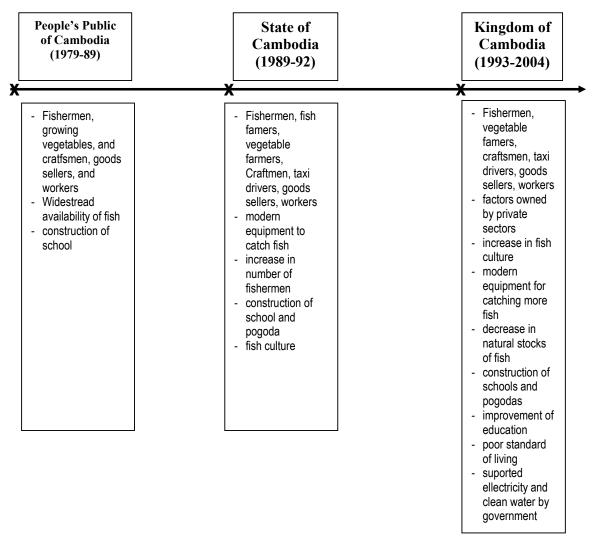
Both the male and female groups developed the historical profile of the community through community timelines participated. The facilitator explained how the timeline would be done. For example, how to define regime and to describe events related to the history of the community.

The male group provided more information in their timeline than the female group. For instance, the male group described events from **Sangkom Reash Nikyom** (The Popular Socialist Community) to the present. In this case, men gave more information about the communities history than the women's group.

- The Popular Socialist community (Sangkom Reash Nikyom) 1953-1970: They had occupations as farmers producing vegetables, rice and fish, fishermen, craftsmen, and brick producers. This village was then called Bropeil, Prap or Doung. There were no pagodas, temples or schools in the village so t they sent their children to villages nearby.
 The village had a lot of trees and animals. There was no need to culture fish as fish were abundant in the wild.
- **Republic of Khmer (Lun Nol) 1970-75:** Their occupations and availability of natural resources were similar to the first regime.
- **Democratic Cambodia (Pol Pot) (1975-79):** During this regime, people in the community were sent to Battambang, Kompong Cham, and Poursat Provinces. Pol Pot put many armies in this village and constructed a lot of DAI (bag net fisheries) to catch more fish than in the last regime.
- **People's Republic of Cambodia (1979-89):** More members of the male group described this regime. The kinds of occupations practised were fishermen, aquaculturists, workers in factories, growing vegetables and construction workers. During this regime, Khmer from other provinces and Vietnamese from Vietnam migrated into the community. According to the female group, the community had a school and fish were still abundant during that time.
- State of Cambodia (1989-92): Both male and female groups described this. They had the same occupation as before. To catch fish, people in the community used modern equipment but natural stocks were already declining at the beginning of this regime. During this period, schools and pagodas were built. The building of schools improved the education in the village.
- **Kingdom of Cambodia (1993-2004),** People's occupations now take to starting businesses but their income was decreasing because of declining natural resources, growing population, cheaper price in market sold products and competition. During the last regimes, factories always belonged to the government but now increasingly factories belong to private sectors in this regime. Peoples' standard of living is poorer than the previous time because they get small amount of income compared to their living expenses. They were also catching small amounts of fish from the wild. As a result, some people decided to build cages along Tonle Sap River and build ponds in order to raise fish. Despite all of these, it was during this period when electricity and clean water was provided by the government to the community.

The Popular Socialist community (1953-1970)	nmunity 53-1970) (1970-75) (1975-79)		People's Public of Cambodia (1979-89)	State of Cambodia (1989-92)	Kingdom of Cambodia 1993-2004		
——————————————————————————————————————	X	X	X	X	— X		
 no fish culture , fishermen, workers, growing vegetables, brick kiln, and craftsmen Doung, Preap or bropeilkai village no pagoda and school alot of forest, wood, wild animals, fresh water, and fish production sold in Prek Phnuav and Phnom Penh 	 no fish culture fishermen, workers, farmers (vegetables and rice field, brick kiln, and craftsmen no pagoda ore school a lot of forest, wood, wild animals, fresh water, and fish 	 People were forcibly moved to live in Batombang, Kompong Cham, and Poursat province The village was filled by armies built up DAI, more than the previous time 	fishermen, growing vegetables , craftsmen, good sellers, workers could not produce in with rice field khmer and Vietnamese migrated to the village.	 fishermen, fish farmers growing vegetables, craftsmen, taxi drivers, goods sellers, workers modern equipment fo catch fish decreased natural stocks of fish construction of schools and pogodas improvement of education 	 fishermen, fish farmers, growing vegetables, craftsmen, taxi drivers, good sellers, workers factors owned by private sectors Increase in fish culture modern equipment for catching fish decreased natural fish stocks construction of schools and pogodas improvement of education poor standard of living suported ellectricity and clean water by government 		

Figure 3.4: Diagrams of Timeline (Men's group)



Fingure 3.5 : Diagrams of Timeline (Women's group)

3.3. Social Characteristics of the Community

3.3.1. Socio/Wealth Status

Two options were adopted in wealth ranking in the village. Option 1 relates to asking the participants to evaluate the relative socio-economic or wealth status of members of the village. Option 2 refers to using key informant interviews to rank members of the village based on a checklist of households and criteria. Therefore, the two results were then combined to form a percentage mean of wealth ranking.

Based on this, the village had 4 wealth or socio-economic ranks: rich, average, poor and very poor. The criteria used include house, land, ponds, properties, occupation, investment, income, and educational level of the children *(See more details in table 4.1)*.

As a result, the relative distribution of wealth status in the village is as follows: 10% rich, 20% average, 50% poor, and 20 % very poor. This shows that more than half of the village belongs to the poor wealth status.

Ranking Criteria	Rich	Average	Poor	Very poor
House	A row of two houses, ground brick houses (big) with zinc and tile roof and plywood wall	Wooden houses with zinc roof and small plywood or leaf wall	Thatched house with leaf and bamboo wall	Cortege with leaf roof or rent from other people (no land)
Land for home	$(10x50) \text{ m}^2$	$(4x6) m^2 \text{ or } (4x8) m^2$	$(4x6) \mathrm{m}^2$	(4x6) m ² (rent land from other people)
Animal culture	More than 10000 fish stocked (pangasius, walking snakehead, and tilapia) and 20-30 pigs	1 pig and 3-4 chickens	1 pig (exchange with other people) and 4-5 chickens	None
Pond	Have own ponds and rent out to other people	(10x50) m ² (small amount of people have own ponds and most of them rent from others)	None	None
Occupation	Fish sauce shop, fishing lot, fish landing site, building construction, and houses for rent, animal culture, lending money	Small scale fish culture, master of construction workers, fishermen, good and fish sellers, factory workers (smaller one)	Small scale fishermen, working in rice field, motorbike taxi, construction workers, and very small business owner	Very small scale subsistence fishermen, workers, motorbike taxis, beggars
Properties	Cars, motorbikes, and TV (modern) and bicycles	Cars, motors, and TV (second hand or not modern and bicycles and boat with engine	Motors (old), bicycles and boats without engine	Old bicycles, small boats without engine
Investment in business	Big investment	Small investment, when they take business need to go to get loan from ACILIDA bank and their neighbors	Smaller investment than average when they take a business need to get loan from ACILIDA bank and their neighbors but a small amount	No investment
Educational level of children	Grade 10 (Senior secondary school)	Grade 7-8 (Junior secondary school)	Grade 4-5 (Primary school)	Grade 1- 3 (Primary school)
Income	High income	Medium income	A small amount of income	Smallest amount of income
Percentage of village	10 %	20%	50%	20%

Table 3.1: Socio-economic/Wealth Ranking in Duong Village

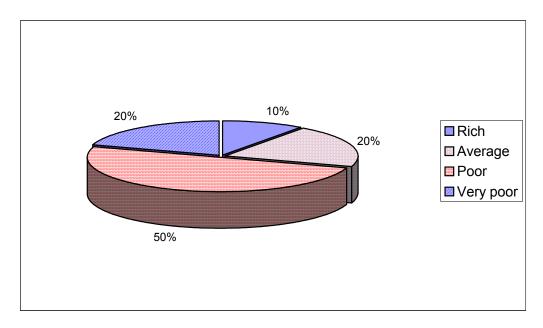


Figure 3.6: Percentage of Wealth Ranking in Duong Village

3.3.2. Social Events and Festivals

In terms of occupation, the male and female in the community have similar occupations such as fish culture, fishing, working in factories and construction and growing vegetables. Fish culture, factory work, and fishing are done throughout the whole year. Construction work is largely done during March to July while vegetable growing is done from April to July and from August to November. The females in the village take other jobs such as selling dry goods, fish, housekeeping, and fish feeding throughout the year.

The traditional festivals are KHMER NEW YEAR (14-16 April), PCHUM BEN festival (24-26 September), KAKTHIN (series of ceremonies last 30 days after rainy season, November) and WEDDING CEREMONIES (from November to April).

3.3.3 Income Activities

According to the female group, income depends on the nature of their work. For example, if fishermen catch big amounts of fish during February-March and July-September, they earn more income than other months.

Table 3.2: Seasonal Calendar (Men's group)

Month	Jan	Feb	Mar.	Apr	Мау	June	July	Aug	Sept	Oct	Nov	Dec
Occupations - Fish culture												
- Factory working												•
 Construction work Fishermen 												
- Fisnermen - Growing vegetables												
Weather - Warm	Very			Hot .								
- Cold												
- Raining								Alot				Very
Water FlowingMoisture			A lot								-	
Society												
 Khmer New Year PCHUM BEN festival 								-	▶			
- KAK THIN ceremonies												
 Wedding ceremony 			→									

Table 3.3: Seasonal Calendar (Woman's group)

Months	Jan	Feb	Mar.	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec
Activities							-	C C	•			
Occupations												•
 Fish culture 												
- Factory work												
 Construction work Fishermen 							►					
 Fishermen Growing vegetable 												
 Good and fish sellers 												
- Housekeepers												
- Food sellers												
Weather				11-4								
- Warm	Very			Hot	•							
- Cold								A lot				
RainingWater flowing											► ►	Very
 Water flowing Moisture 			A lot									,
molotaro												
Society												
- Khmer New Year			.	►	•							
 PCHUM BEN festival 								-				
- KAK THIN ceremonies												
- Wedding ceremony		Alat					Alat	Alat	Alat			,
Income		A lot	alot				A lot	A lot	A lot			
												'

3.3.4. Food consumption and Sources

Male and female groups consume many kinds of foods. For example, they eat a lot of meat regularly such as pork, beef, chicken, and duck bought from markets, except for chicken, which is produced by some people in the community during February and April. Fish is consumed throughout the year, which is either purchased in the market or caught from the wild. Dried and smoked fish, which are consumed year-round, and are both produced and bought. The female group also eats frogs, which they either buy or catch from the wild during August to September. Leafy vegetables are produced during April, July and September. Rice is an important food item in the village, which is bought and eaten all the time. Sometimes they get rice during July from the Vietnamese pagoda and from the government during September to October. The female group also reported the consumption of corn bought from April to July as well as beans, which are bought during festivals. The male group also reported consuming instant noodles and "tin fish" throughout the year, which they bought in local shops.

	Note:	buy	,		iced by s		Aid	Natu	ral harves	sting		
Months					•••••	<u>ب</u>	•••••		-	▶		
Kinds of food	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec
Meat - Pork												
- Beef - Chicken			. =									
- Duck									:	••••	•	
 Fish Frog Snail and clam 									×			
 Dried fish and smoked fish 				====:							====	
 Prahok or Phork (fermented fish) 												
Vegetables												
- Leaf - Bulb												
Сгор												
- Rice - Corn			-				•			•••••		
- Beans								-				

Table 3.4: Food Consumption (Men's group)

\smallsetminus	Note:	buy	1		ced by s		Aid	Natu	ral harve	sting		
Months		_ →	•		••••••	۰۰ ×	····· Þ		[▶		[
Kinds of food	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec
Meat												
- Pork - Beef			. =	*								
- Chicken - Duck - Fish											•	
- Dried fish and smoked fish		= = = = = = :										
 Prahok or Phork (fermented fish) 				= = = = = :					= = = = = :			
Vegetables												
- Leaf - Bulb			=			=		=	••••			
Crop - Rice							·····•		·····	•		
Others - Instant noodle												
- Fish can												

Table 3.5 : Food Consumption (Woman's group)

3.3.5. Activities Matrix in Community

a) Female

Women fishers always get up at around 1:00 to 2:00 AM and catch fish from 3:00 to 6:00 AM. They then sell the fish from 7:00 to 10:00 AM. Other women rise at around 4:00 to 6:00 AM. They prepare their house between 6:00 to 7:00 AM and children at 5:00 AM. They go to market around 6:00 to 7:00 AM. Goods sellers (traders) start opening their business around 3:00 to 4:00 AM and sell until 7 PM. Vegetable sellers begin selling from 4:00 to10:00 AM. Pork sellers start from 5:00 to10:00 AM. Factory workers go to work from 6:00 AM until 12:00 noon and work again from 1:00 to 5:00 AM in the afternoon. Construction workers go to work at 6:00 AM to 12:00 noon and start again at 1:00 until 5:00 PM. Moreover, female members in the community perform other tasks such as cooking food. They take rests by watching TV or listening to the radio and so on around 7:00 to 11:00 PM. They go to bed anywhere between 9:00 to 12:00 midnight.

				1	1			1		r	1	1	n	1	1	1	1	1	r –	r	1			
Times	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
Activities																								
Get up	х	х		х	х	х																		
Organize house						x	x																	
Prepare for children go to school						x																		
Go to market							х	х																
Go catch fish			X			•																		
Sell good			x	x															•					
Sell fish							x			•														
Sell vegetables				x						•														
Sell pork					x					•														
Sewing						x-						•	X-				•							
Construction working						X					•		X				-							
Rice cooking and eating											х	х					х	х						
Take a rest (afternoon)												x	x											
Cloth washing									х	Х														
Rest (TV, Radio)																			<u>x</u>	x		•		
Go to sleep																					<u>x</u>	x		

Table 3.6: Activities Matrix of Women

b) Male

Fishermen always get up around 1:00 to 3:00 AM and go fishing between 3:00 to 6:00 AM. They sell fish between 7:00 to 10:00. Fish farmers buy fish feed between 3:00 to 7:00 AM and feed their fish 4 times at 7:00 PM, 11:00 AM, 4:00PM, and 8:00 PM each day. Those people who are government official or civil servant work between 7:00 AM and 5:00 PM. Construction workers work between 6:00 to 11:00 PM and 1:00-5:00 PM with an hour for lunch break. The meal times are usually 11:00 to 12:00 noon for lunch and 5:00 PM to 6:00 PM for dinner. They usually take rest after lunch for an hour and watched TV or listen to radio after dinner. Bedtime is anywhere between 9:00 to 12:00 midnight.

Table 3.7: Activities Matrix of Men

Times																								
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
Activities	_																							
Get up	Х	х	х																					
Buy fish feed						Х	х																	
Fishe feeding						Х					Х					Х				Х				
Go to work							x				•	•		x			•							
Go catch fish			x			•																		
Go to grow vegetables			x-	X															•					
Sell fish							X			•														
Construction working						X					•		X				-							
Rice cooking and eating											х	х					х	х						
Take a rest (afternoon)												x	x											
Rest (TV, Radio)																			<u>x</u>	x		-		
Go to sleep																					x	x		

c) Children

Children in the community normally get up around 5:00 to 6:00 PM. Some would go to school at 6:00 to 10:00 AM or 10:00 to 1:00 PM or 1:00 to 5:00 PM depending on their schedule of study. Some children help their parents harvest fish between 3:00 to 6:00 AM and sell them between 6:00 to 7:00 PM. Other children would help their families sell goods between 7:00 to 10:00 or 2:00 to 3:00 PM if they don't go to school. They also go to provide feeding for the animals at 7:00, 10:00 AND 16:00. They have a lunch at 11:00 AM and dinner at 5:00 PM. They play games between 4:00 to 5:00 PM, and between 6:00 to 10:00AM, they watch TV. Bedtime is around 9:00 to 10:00 PM.

Table 3.8: Activities Matrix of Children

Times	1	2	3	4	5	(7	0	9	10	11	12	13	14	15	16	17	10	10	20	21	22	22	24
Activities	1	2	3	4	Э	6	/	8	9	10	11	12	15	14	15	16	17	18	19	20	21	22	23	24
Get up					Х	х																		
Go to school						x-				x				X										
Rice eating								_			х					х								
Go to catch fish			<u>x</u>			•																		
Go to visiting						x	x	х	•				x	х	х	х	•							
House cleaning								x	x	х				х	х	х	х							
Sell goods							x			-				x			•							
Sell fish						x	-	•																
Fish feeding							х			Х						х								
Exercise (sport)																	x	x						
Rest (TV, Radio)																			<u>x</u>	x		•		
Go to sleep																					x	x		

3.4. Problem Ranking

This activity involved both male and female groups, but their ranks were made on separate columns. Beans were used in the ranking. Problems were listed first and then ranked. The result of the ranking is shown in Table 3.9. The overall top 4 major problems are theft, taxes on boats, lack of capital and the declining natural resources especially fish.

No.	Type of Problems	Females	Males	Total	Ranking
1	Boat tax	25	20	45	2
2	Market tax	19	13	32	6
3	Fish market trading	8	7	15	13
4	Lack of investment	20	18	38	3
5	Decrease in natural fish	15	23	38	3
6	Fish disease	13			
7	Skin enfection	13	4	17	12
8	Theft (nets chicken and duck.)	40	14	5	1
9	Not enough schools and teachers	19	7	26	9
10	Natural destruction (flooding)	15	8	23	10
11	Health	10	9	19	11
12	Westewater (come from walking catfish culture)	15	13	28	8
13	Small roads in village	21	15	36	5
14	Wave of ship causing erosion	15	15	30	7
	Total	248	166	552	52

Table 3.9: Problem Ranking in Duong Village

IV. Conclusions

According to the result of the PCA, we can conclude that:

- The participants were interested in our participatory community appraisal because it can improve their discussions and find out more of what is happening in their community.
- More than half of the people in this community consider themselves poor because of lack of investment to improve their business.
- Their income is not enough to support their families.
- There are problems of security in the village such as theft.
- They have problems with taxes on boats, lack of capital and declining natural resources.

V. Recommendations

- The government, especially the authority in this village should provide more security for them.
- This project should provide training on how to improve their business in order get more income.
- The government should be reducing boat tax.

References

- Mr. Chav Bonthong, Village Leader, Statistical Population in Duong Village, Prek Phaunv Commune, Porneilea District, Kandal Province (2003)

Appendix A

Mr. Chhouk Borin	Coordinator
Mr. Thak Kuntheang	Team leader and documenter
Mr. Srey Saman	Documenter
Miss. Sok Daream	Facilitator
Miss. Chim Rummy	Facilitator

PCA Team Member

List of Participants in Doung Village

N°	Name of Participants	Sex	Others
1	Chav Bonthong	Male	Village leader
2	Huot Holl	-	Sub-village leader
3	Norng Thy	-	Representative
4	Huot Sokheing	-	-
5	Sok Heng	-	-
6	Rit Oeun	-	-
7	Vy Thoy	-	-
8	Chea Mokheang	-	-
9	Sok Thy	-	-
10	Kok Hak	-	-
11	Sav Hor	-	-
12	Eir Sarom	-	-
13	Moush An	Female	-
14	Phoung Run	-	-
15	Phoung Vanny	-	-
16	Sav Lang	-	-
17	Ly Komhoeun	-	-
18	Vy Heng	-	-
19	Oum Seing	-	-
20	Meas Phat	Male	-
21	Huot Heng	Female	-
22	Keu Leng	-	-