

**Provincial Department of Agriculture and Rural Development
Provincial Women's Union
Research Institute for Aquaculture No 1**

**A livelihoods study of fishers and farmers
in
Long An Province**

October 2001

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Acronyms

DARD	Department of Agriculture and Rural Development
DFID-SEA	Department for International Development South East Asia
GDP	Gross Domestic Product
HEPR	Provincial Commission for Hunger Eradication and Poverty Reduction
HCMC	Ho Chi Minh City
PRA	Participatory Rural Analysis
SAPA	Sustainable Aquaculture for Poverty Reduction
STREAM	Support to Regional Aquatic Resources Management
VAC	Vuon-Ao-Chuong (Garden-Pond-Animal Pen)
VND	Vietnamese Dong (15,400 Dong \approx US\$ 1)

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Thanks to guidelines and assistance from DFID-SEA, we conducted livelihoods studies in the two communes of Thuan Nghia Hoa and My Thanh Dong, in Thanh Hoa and Duc Hue Districts respectively, of Long An Province.

Study methods referred to in the report were introduced by DFID-SEA and the Research Institute for Aquaculture No 1 at two training workshops in Thai Nguyen from 13-15 February 2001 and Quang Tri from 20-24 August 2001 where the handbook on "Livelihoods Analysis (LHA) and Participatory Rural Appraisal (PRA)" by RIA-1 and DFID-SEA were used as training materials.

The implementation process was facilitated by Ho Chi Minh City (HCMC) University of Agriculture and Forestry, Long An Provincial Department of Agriculture and Rural Development, Long An Provincial Women's Union; the People's Committee, Agriculture Extension Station and Women's Union of Thanh Thanh Hoa District; the People's Committee and Women's Union of Thuan Nghia Hoa Commune, Thanh Hoa District; the People's Committee, Agriculture and Rural Development Office, and Women's Union of Duc Hue District; the People's Committee and Women's Union of My Thanh Dong Commune, Duc Hue District.

We would like to extend our sincere thanks to the above-mentioned institutions and organizations which have kindly supported us in preparing this report.

EXECUTIVE SUMMARY

This is the report of a livelihoods study team working together with people from two villages in Long An Province, Vietnam. The study is based on information provided by the villagers, who shared their knowledge and spoke about real problems they face with their livelihoods. This study was conducted from 11-20 October 2001. The team worked with key informants in two communes, Thuan Nghia Hoa and My Thanh Dong, who volunteered to participate and represented the 177 households in the village.

The villagers rely mainly on forestry and agricultural activities, which largely depend on the rainy season that begins in April and ends in October. Rice monoculture is chosen for two crops a year. In addition to rice, other crops are grown such as banana, papaya, herbs, citrus, vegetable and bamboo. These are mainly grown in homestead gardens. In the dry season, fish are also cultured in ponds and diverse fishing methods are employed.

In terms of infrastructure, just over 73% of households have access to power. There is approximately one well for every 100-110 households. Roads and waterways provide a means of transport. While many of the poorer members of the commune have sampans, some of the wealthier inhabitants own motorboats. There are seven schools with 33 classrooms, and a six-bed health care station, but no market.

Generally speaking, poor people in these communes are disadvantaged in terms of land, credit, labor, knowledge and information and are often exposed to risks. The main constraints which affect poor fishers and farmers in these communes include lack of funds, production facilities, education, and technical skills. Living in remote areas, difficult livelihoods conditions prevent them from accessing information flow on techniques, cultural and social development, and government policies. They are also the 'bottom' beneficiaries of social welfare; hence government and non-government assistance is highly required.

A number of interventions could assist these fishers and farmers, including the setting up of a market information system and the transfer of fish capture, culture and processing technologies, appropriate with the local conditions of farmers and fishers so that they could produce enough fish for food and income. Additionally, credit systems could be improved so that these households have more access to funds and low-interest loans.

1. INTRODUCTION

1.1 Overview

Long An is a Mekong Delta province. It covers approximately 435,500 ha and contains 299,440 ha of the Dong Thap Muoi swamp region. As a southern gate to Ho Chi Minh City, looking over the Mekong River Delta, it functions as a trade link between the biggest city and the biggest delta of Vietnam. Furthermore, the 137.7 km border with Cambodia gives the province a critical economic position.

Agriculture is the main economic sector. In 1998, gross products of the three sector groups agriculture, forestry and fisheries; trades and services; and industry were 55%, 28% and 17% respectively. GDP grows at nearly 6.5% per year, as calculated using 1994 price standards. In the first group, agriculture accounts for just over 88.3%, forestry 7% and fisheries nearly 5%. Within the agricultural sector itself, cultivation accounts for 77.5% of the production, husbandry for 16.3% and agricultural services for 6.2%.

Between 1998-2000 important progress was made in poverty reduction in Long An Province. The incidence of poverty decreased from 12.2% in 1998 to 8.5% at the end of 2001. The province has set its poverty reduction target to 5% by 2005. The Provincial Communist Party Congress for the term 2001-05 has planned four focal programs, of which the Poverty Reduction and Job Creation Program is the first priority. The Provincial Commission for Hunger Eradication and Poverty Reduction (HEPR) was set up in 2001 and will run until 2005. It is headed by the Vice Chairman of Provincial People, who is assisted by the DARD Director. In each district and commune, there is a functional HEPR Panel. In each of 14 priority communes, an official is appointed to be responsible for this work and earns a part-time honorarium of 260,000 VND/month. In other communes, the part-time HEPR officials receive 30,000 VND per month. The provincial HEPR program is progressing well, although many constraints and problems still exist.

The livelihoods studies were conducted in the two communes of Thuan Nghia Hoa and My Thanh Dong, in Thanh Hoa and Duc Hue Districts respectively. Demographic information and poverty data for the two communes are shown in Appendices 1 and 2.

1.2 Objectives of livelihoods analysis of fishers and farmers

The livelihoods analysis had three objectives:

- To analyze and assess the situation, livelihoods and resources of poor fishers and farmers in Thuan Nghia Hoa and My Thanh Dong Communes, using a Participatory Rural Appraisal (PRA) approach.
- To understand factors, capabilities, needs and the most important occupations, so as to establish a framework that helps poor fishers and farmers escape from poverty themselves when external support is available.
- To set a base for central organizations to develop a strategy of Sustainable Aquaculture for Poverty Reduction (SAPA) as a component of the government's HEPR program.

2. METHODOLOGY

2.1 Livelihoods analysis team members

The livelihoods analysis team was made up of:

- Hoang Khac Tuong, Department of Agriculture and Rural Development
- Vo Thi Kim Lieng, Provincial Women's Union
- Le Minh Tam, Thanh Hoa District Agriculture Extension Station
- Le Van Khoe, People's Committee of Thuan Nghia Hoa Commune, Thanh Hoa District
- Le Mong Tuyen, Women's Union, Thuan Nghia Hoa Commune, Thanh Hoa District
- Nguyen Thi Hinh, Thanh Hoa District Women's Union
- Le Son Tui, Agriculture and Rural Development Office, Duc Hue District
- Le The Muc, Duc Hue District Women's Union
- Ho Thi Huong, Women's Union, My Thanh Dong Commune, Duc Hue District
- Phan Van Hung, People's Committee, My Thanh Dong Commune, Duc Hue District
- Vo Thi Thanh Binh, HCMC University of Agriculture and Rural Development

Hoang Khac Tuong was the team member responsible for final compilation of the report.

2.2 Formation of analysis groups

Table 1 shows the formation of the analysis groups.

Table 1 Formation of analysis groups

	Three-group stage		Two-group stage	Interviewee categories	Key grassroots informants	
					In Thuan Nghia Hoa Commune	In My Thanh Dong Commune
1	1 Tam	1	1 Hung	Village heads and vice heads, HEPR officers, security guards	1 Nguyen V Don 2 Doan V Hanh 3 Doan V Thai 4 Nguyen V My 5 Tran V Cat 6 Nguyen V Khoe 7 Vo Thi Giang 8 Hy Thi Dang 9 Hy V Yen	1 Nguyen V My 2 Le V Bieng 3 Nguyen V Rong 4 Dang V Nhon 5 Vo V Quan 6 Pham V Thuan 7 Le V Nghia
	2 Muc		2 Muc			
	3 Tuong		3 Tuong			
	4 Hung		4 Tuyen			
2	1 Hinh	2	5 Khoe			
	2 Tuoi		1 Hinh			
	3 Lieng		2 Tuoi			
3	1 Khoe		3 Lieng			
	2 Huong		4 Huong			
	3 Tuyen		5 Binh			
	4 Binh	6 Tam				

2.3 Information gathering

There was first a discussion of PRA tools. Then the teams identified key issues in interviews related to people's livelihoods, as well as their income, occupations, advantages and disadvantages, financial resources and loan interest rates, technical and market information sources, resource use traditions, and victims of resource devastation. The Commune People's Committee was visited directly by the groups.

With respect to poor farmers, these activities were conducted:

- During a trial survey, three groups went on a field visit and interviewed farmers.
- The groups aggregated and summarized lessons learnt.
- The team was then divided into two groups to start interviewing five farmers' groups in five villages and visit a number of poor households.

2.4 Data analysis and evaluation

First there was a selection of reporters. They were grouped to start drafting and to brainstorm ideas on the draft. Representative of the reporters' group reported back the outcomes, and group members put forward their expectations (Appendix 3).

2.5 Scope and target group

The target group was all poor households in the two communes which had received Poverty Certification Books issued by the Ministry of Labor, Invalids and Social Affairs, through Commune People's Committees, since 1998. These are individuals who earn less than 120,000

VND/person/month. (The list of poor people is updated annually by commune authorities.)

2.6 Analysis and research plan

The plan included:

- Studying materials on livelihoods analysis of poor people and on activities already done in Thai Nguyen and Quang Tri
- Discussing how to use PRA tools
- Forming working groups
- Selecting reporters, initial drafting of the report, circulation of the draft report among team members to facilitate group discussions, presentation of the report in a plenary session with the team, and
- Group discussions and feedback on the final livelihoods analysis report.

3. RESULTS OF LIVELIHOODS STUDY IN THUAN NGHIA HOA COMMUNE

3.1 Overview of socio-economic and natural conditions

3.1.1 Geographical location

Thuan Nghia Hoa Commune of Thanh Hoa District has a total of 3,593 ha of natural area. Of 1,224 households (6,179 people), 254 are poor and 122 of these carry Poverty Certification Books¹. Thuan Nghia Hoa Commune is situated in the lower area of Dong Thap Muoi wetland region, next to the Vam Co Tay River, which connects the southwest of Vietnam with Ho Chi Minh City (HCMC). Due to its low-lying location, it is often inundated from August to October. In the dry season, this area is affected by droughts and alum².

3.1.2 Climatic conditions and soil quality

Forestry and agricultural activities, and thus people's lives, depend largely on the rainy season that begins in April and lasts until the end of the flood season in October. The dry season lasts from November until April. Due to the low-lying position, rice monoculture is chosen for two crops a year. Nutritious silt brought in by flood water makes the winter-spring crop as abundant as 4.5-5.0 tons/ha. The summer-autumn crop records a lower productivity of 2.0-2.5 tons/ha owing to alum and droughts.

Previously, in the dry season people faced a shortage of water both for use in their daily lives and in the paddy fields. Thanks to irrigation canal systems funded by the government, fresh water is now brought from the upper river basin to major canal branches. Smaller channels have also been built by farmers, who have raised funds for these among themselves. Thus, in general, water is no longer a problem in the livelihoods of local farmers.

Besides key plants such as rice and *tram (Malaleuca)*, the commune people grow other crops such as banana, papaya, spring onion, herbs, citrus fruit (oranges and lemons), vegetables and bamboo in the homestead gardens set aside for family use.

3.1.3 Agriculture and forestry activities

Water-fed rice farming is the most common type of farming in this area. Two thousand hectares of land are planted with rice in two intensive crops a year. As mentioned earlier, the winter-spring crop land covers 2,069 ha

¹ People who carry Poverty Certification Books have an income of less than 120,000 VND per person per month.

² Alum makes the soil more acidic and thus more difficult to cultivate.

and yields 4.5-5.0 tons/ha of rice. The summer-autumn crop covers 1,300 ha and yields 2.0-2.5 tons/ha. The main natural threats to these crops are rats, droughts, alum and salt intrusion. The area set aside for malaleuca covers 1,000 ha. A 4 ha-area, which used to be utilized for jute and potato plots, is now planted with malaleuca.

Home husbandry is underdeveloped, since in the dry season the soil is acid-aluminum and salty. In the flood season, only a few families raise ducks. In the dry season, fish are cultured in ponds; in the flood season, diverse fishing methods are employed. Rods, nets, lift nets, traps and other methods are used to catch fish, snails and other aquatic animals. At this time of the year, snakehead, swamp eel and catfish are nursed in hapas, a sort of fixed net in which the fish are kept to be released into the pond when the flood recedes. In a hamlet of 50 families at Ba Luong Village, 40 farmers have snakehead and catfish hapas.

Major agriculture plants include rice, malaleuca, peanut and sugar cane. Some farmers who have a firm financial base are more dynamic in looking for technical and market information, have higher levels of education and are more industrious. They will have more opportunities to become well-off raising cattle, fish, ducks and other livestock.

The area set aside for gardening is 238 hectares.

3.1.4 Infrastructure

The national power network has reached five of six villages of the commune and 73.3% of households. The commune has ten drilled water wells: on average, one well for every 100-110 households.

In addition to the 7 km of inter-commune and 11 km of inter-village roads, waterways provide an important means of transportation. The main transport facilities are more than 2,000 motorboats in various sizes (belonging to wealthier commune members) and the manual sampans of poorer people.

Thirty-three classrooms in seven schools located in five villages have been rebuilt in concrete. Twenty-nine of these are located in six of the primary schools, and the remaining four rooms belong to a combined primary and lower secondary school.

The commune's six-bed healthcare station is under the supervision of a doctor who is supported by three medical assistants.

No market has been established.

A family from Thuan Nghia Hoa Commune

Mr Nguyen Van Hung lives in Nhon Xuyen Village, Thuan Nghia Hoa Commune, Thanh Hoa District. There are three adults and two children in his family. He doesn't own any farming land but he has a 300-m² fish pond and a sampan (small boat) as a means of transport. His family makes a living by fish-netting and raising fish and pigs. On a seasonal basis, the adults harvest rice and cut malaleuca for other families. From December to February of flooding season is their fishing time. The set of net and hooks, which cost 200,000 VND when they were bought, helps them catch 3-5 kg of fish every day that are sold at 5,000 VND/kg. The period from February to June is mostly spent on contractual work: 60 days are for rice harvesting and malaleuca cutting. The 70,000 VND daily wage is just enough for rice to feed the family. The house, made of a dilapidated malaleuca frame, contains only one bamboo bed and a sampan boat inside.

3.1.5 Social life

In general, the commune people are poor. In the last few years, a decrease in the price of rice and other agro-products resulted in a lowering of the prices they could ask for their produce. This decrease in prices, coupled with repeated natural disasters, has made it more difficult to sustain rural livelihoods. The state has regularly had to subsidize the commune.

In a twelve-month cycle, a poor farmer might typically work for sixty days: forty of these are spent on contractual farming and twenty on other irregular jobs. The daily wage is 30,000 VND per person for men, and 20,000 VND per person for women.

Rich households make up 15% of the total number of households, better-off 57%, medium 8.3% and poor 20.7%. In 2000, 1,207 families were affected by floods. Eighty-one of these had to move house. Twenty-nine organizations came to deliver relief aid that year. In 2001, 1,098 families were flood-affected and 23 had to relocate.

3.1.6 Difficulties of the commune

The commune members, and particularly poor people, are disadvantaged in many respects by living in a remote and isolated commune that is physically hard to reach. Although government institutions at various levels have made significant efforts, serious problems still exist with clean water supply. This causes real difficulties in people's lives which become more serious in the flood season when people have to resort to using river water. Hygienic conditions cannot be ensured, particularly in the rainy season, and commune members tell the story of a person who died, and for three months the family could not find a place to bury him.

As 60-70% of credit loan recipients are unable to repay loans, the money lenders are reluctant to loan funds to other members of the community, even those who manage to repay them.

The alum level of the soil is seriously high and this impedes agricultural activities.

3.2 Outcomes of livelihoods analysis in Thuan Nghia Hoa Commune

3.2.1 Natural resources

Land

Poor people usually have insufficient farming land. Half of the poor farmers do not possess any rice fields. Table 2 shows details of village land holdings.

Table 2 Details of village land holdings³

Group of farmers per village	1/3	2/2	3/1	4/4	5/6	Total
Total number of poor households	20	19	26	30	27	122
Number of invited households available	20	17	20	28	27	112
Rice-field owning households	20	8	20	8	13	69
Two rice crops	20	8	15	3	13	57
Partly sold		2		5		7
Currently in pledge		1		2		3
Malaleuca				12	5	17
Garden owning households	5	8	10	5	5	33
Currently used for vegetable growing	5	5	10	2	4	26
Papaya		3		3	4	10
Pond owning households	10	10	11	3	20	54
Fish pond owners	2	10	2	2	6	22
Ponds for rent				1		1

All of the poor farmers have homestead gardens and ponds but do not grow plants or culture fish. In some cases farmers have to pledge their farming land to get money to repay debts or to buy medicines or hospital services when a member of the family has an accident or is ill. Even a small area of land is sometimes vital to their livelihoods.

³ No 1: Tra Cu Village; No 2: Nhon Xuyen Village; No 3: Ba Luong Village; No 4: Vuon Xoai Village; No 6: Vam Lon Village. No 5 is not represented here.

Meteorological and climatic features

The seasonal calendar in Table 3 indicates periods of activity. The seasonal calendar also indicates the rains and floods which are typical local features that affect the lives of poor people and the availability of their resources.

Table 3 Seasonal calendar

Month	1	2	3	4	5	6	7	8	9	10	11	12
Cultured Fish												
Wild fish												
Malaleuca												
Jute												
Rice												
Flood												
Rain												

In addition to the annual flood, generally in the past a huge flood has happened every 5-7 years. Nowadays, this may happen continuously for three or four years. Droughts at the beginning of cropping and salt intrusion in paddy fields cause significant reduction of and damage to agricultural production.

Apart from this, however, the system of numerous channels and canals are a good resource for agriculture and additionally provide a habitat for shrimp and fish (Table 4).

3.2.2 Human resources

Poor families often lack labor (Table 5) and cannot get sufficient work to sustain them. Labor that is not well qualified or experienced, and is mostly contractual work in rice-harvesting, weeding, malaleuca growing, excavating of canals and channels and rice carrying.

Traditional occupations are masonry, tailoring, and weaving baskets and pads from locally existing material. Farmers are also experienced in:

- Using squash to prevent crabs from killing fish and swamp eel
- Making homemade medicines for frogs
- Farming on acid-aluminum soil
- Treatment of alum
- Capture of wild fish
- Seasonal nursery of fish

Table 4 Aquatic resources in priority order

Practice	Tool	Species	Time	Capacity
Rod fishing	Rod, line, <i>cau re</i> ⁴ , bait, lamp, raincoat, <i>gio</i> ⁵ basket	Snakehead, catfish, shrimp, climbing perch	Jul–Nov	5-10 kg/night
Trapping	<i>Lo</i> ⁶ , <i>lop</i> , <i>trum</i> ⁷ , fork, lamp, boat, <i>day</i> , trash net, <i>ro</i> ⁸ basket, <i>let</i> trench	Snakehead, catfish, tiger frog, swamp eel, snake, climbing perch	Jul–Dec	2-10 kg/night
Netting	Net, boat, lamp, raincoat, <i>gio</i> basket, <i>ro</i> basket	Climbing perch, snakeskin, gourami, silver carp, snakehead, catfish, yellow mystus	Jan–Dec	5-10 kg/night
Large net fishing	Large-mesh net, net, boat, lamp, raincoat, <i>gio</i> basket, pole, big vessel	Linh, climbing perch, white snakehead, <i>long tong</i> , snake, swamp eel, tiger frog	Sept–Nov	
Fish culture	Pond, seeds, feed, care-taking, alum treatment, freshwater	Mekong giant catfish, common carp, giant gourami, tilapia, grass carp, kissing gourami, silver carp, red tilapia	Nov-Jul/Aug	
Nursery of snakehead, swamp eel in flood season	<i>Don</i> , lift-net, <i>bung</i> , fine-mesh net, bamboo poles (for trapping of baits)	Bait species: <i>ro thia</i> , <i>linh</i> , <i>long tong</i> , <i>chooc</i> , <i>trac</i> , crab	Nursery time: Aug-Nov (flood season); afterwards the fish are removed to ponds in December and grown out until March/April.	Bait collecting yield: 2-5 kg/night

Table 5 Human resources per household

Village	3	2	1	4	6	16
One-laborer households	4	1	5	15	3	28
Two-laborer households	8	10	10	9	11	48
More than three laborer households	8	6	5	4	11	34
Non-laborer households		1	1	2	1	5

⁴ Seine

⁵ A squat cylindrical-shaped basket

⁶ Bamboo trap to catch fish

⁷ Bamboo trap to catch eel

⁸ An urn-shaped basket

3.2.3 Production inputs

Houses are dilapidated, roofed with either *dung*⁹ or coconut leaves and hence prone to cyclones, floods and heavy rains. Poor farmers make houses merely to shelter from the sun. Few people can afford a TV, radio or cabinet. Pig sties are not used since pig raising is unprofitable. (See Table 6.)

Table 6 Assets per household

	Group/Village	1/3	2/2	3/1	4/4	5/6	Total
	Total number of poor households	20	19	26	30	27	122
	Number of invited households available	20	17	20	28	27	112
1	Boat owning households	20	17	20	28	18	93
	Engine boat owners	13	12	10	10	6	51
2	Pig-sty owning households	6	5	2	5	9	27
	Pig raisers	2	5	2	4	4	17
3	Bicycle owning households	4			2		6
4	Electricity users	5	2	6	7	5	25
5	TV owners	4	8	2	27	3	44
6	Radio owners	10	9	3	28	7	57
7	Families with corrugated iron-roofed house	2	3	3	5	1	14
8	Families with altar cabinet	3	5	1	20	9	38

The most common production tools used by poor people are sickles, hoes, shovels and knives. The most important and valuable asset is a boat which would normally cost between 200,000 and 300,000 VND. Some families have motorboats but these are mainly sponsored by donor organizations.

3.2.4 Social resources

Organizations concerned with poor people

In this commune a range of organizations supports poor people (Figure 1):

- Women's Union: 25 village-level sub-unions regularly support poor people
- Two Agriculture Extension Clubs
- Five rice processing plants which help create employment for poor people

⁹ A local plant whose leaves are used as a roofing material

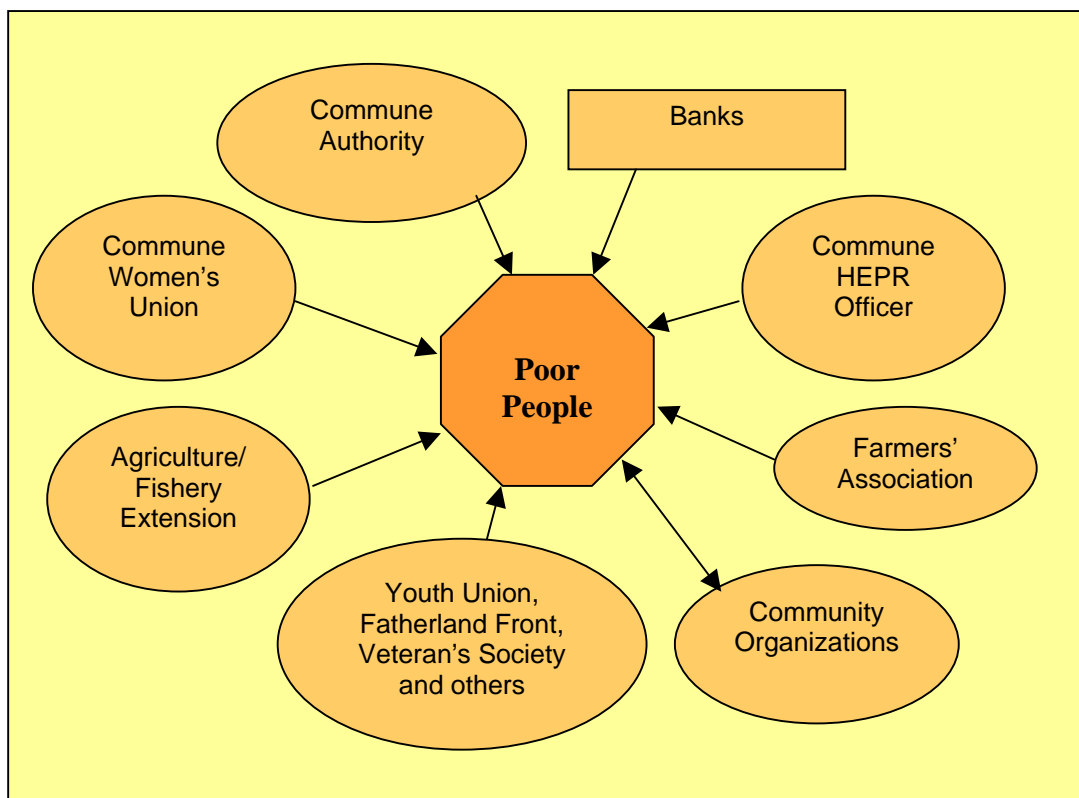


Figure 1 Organizations supporting people in Thuan Nghia Hoa Commune

3.2.5 Financial resources

Poor families have hardly any savings and usually fall into debt. When visiting the households who received Poverty Certification Books, we had the feeling that they are living slightly above the hunger line, since they have to use all their energy finding enough to eat in the three flooding months. Contractual work is only available for them in dry season.

3.2.6 Risks and other impacts

Year-round risks

Table 7 shows the frequency of natural disasters over a period of ten years. In addition to the annual floods, other natural disasters include pests, cyclones and droughts.

Table 7 Seasonal frequency of natural disasters

Year	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
Rats		April-May										
Brown leaf-hoppers			Feb-Mar									
Cyclone				Apr-May								
Salt intrusion			Mar-Apr									
Drought												
Huge flood												
Annual flood												

The environment is being degraded on a daily basis by human interventions such as the dredging of irrigation canals, the setting up of flood-preventing dams, intensive rice farming that leads to the increase of alum, flood intrusion, the higher frequency of huge floods, and the longer duration of the flood season. People have little awareness of how to exploit existing natural resources from mangroves or floods.

The shortage of clean water, poor hygiene facilities and inconvenient transport services are overwhelming issues.

Table 8 shows flood levels in peak years between 1984 and 2001.

Table 8 Flood levels

Year		1984	1991	1994	1995	1996	2000	2001
Flood level in the peak years	2.5 m							
	2.0 m							
	1.7 m							
	1.6 m							
	1.5 m							
	1.0 m							
Lowest water level	1.06 m							

Other risks

In addition to seasonal risks, commune members are affected by other risks such as disease, accidents, adverse weather conditions such as cyclones, and the effects of war (Table 9).

Table 9 Other risks affecting households

Group/Village	1/1	2/3	3/1	4/4	5/6	Total
Total number of poor households	20	19	26	30	27	122
Number of invited households available	20	17	20	28	27	112
Accident-affected households	3	1	1	2	4	54
Disease-affected households	2	4	3	7	2	38
War-affected households				2		13
Families of cyclone-hit houses		2	1	2	1	11

Impacts of externally determined policies

In recent years, fishers, farmers and poor people in Thuan Nghia Hoa Commune have benefited from support policies on rural economic development, such as regulations on long-term land allocation, credit loans, extension services, job creation and poverty reduction initiatives (Table 10).

Table 10 Impacts of external policies

Group/Village	1/1	2/3	3/1	4/4	5/6	Total
Total number of poor households	20	19	26	30	27	122
Number of invited households available	20	17	20	28	27	112
HEPR loan recipients	12	15	12	5	10	54
Recipients of loans for heightening house foundation	5	10	11	7	5	38
"Houses for the poor" owners		3	1	5	4	13
Corrugated iron-roofed house owners	1	2	2	5	1	11

Box 2

A farmer's income

Mr Huynh Van Bon, Vuon Xoai Village, Thuan Nghia Hoa Commune, lives with his spouse and four children. His 0.3-ha one-crop rice field is as productive as 2.5 ton/ha/crop. Besides rice farming, the couple earns more money by contractual harvesting of potato in May, weeding in November, and fishing from December until February.

Income from rice: $900 \text{ kg} \times 1,300 \text{ VND/kg} = 1,170,000 \text{ VND}$

Income from contractual work: $60 \text{ days} \times 30,000 \text{ VND/days} = 1,800,000 \text{ VND}$

Income from fishing: $3\text{-}5 \text{ kg/day} \times 60 \text{ days} \times 5,000 \text{ VND} = 1,200,000 \text{ VND}$

Total annual income: 4,170,000 VND

Monthly per capita income: $4,170,000 \text{ VND} / \text{six persons} / 12 \text{ months} = 50\text{-}60,000 \text{ VND}$

4. RESULTS OF LIVELIHOODS STUDY IN MY THANH DONG COMMUNE

4.1 Overview of socio-economic and natural conditions

4.1.1 Geographical location

My Thanh Dong Commune is in Thanh Hoa District of the Dong Thap Muoi wetland region in the northeast of Long An Province. This area links the southeast and southwest and has a total of 3,268 ha of natural area. It is bordered to the north by Cambodia, to the west by Binh Thanh New Economic Zone, to the east by the Vam Co Dong River and to the south by Binh Hoa Bac Commune.

This low-lying region is always prone to flood waters from September to October and its knolls are affected by acid-aluminum and are much less fertile than other areas. However, the silt-rich sediments of the river provide nutritious food for aquatic resources.

4.1.2 Climatic conditions and soil quality

There are two major seasons: the dry season is from December until March while the rainy season lasts from April to November. In the low-lying areas, rice is cultivated for the first three months (April, May and June) of rainy season but the rice yield fluctuates due to alum and wild weeds. Thus production costs are higher because of the cost of lime and herbicides. Sometimes flood water spoils the rice at the end of the crop. As proper measures, such as liming, are not taken in acidic rice fields and fish ponds, there is a high rate of fish mortality and loss in rice production. Sand and ash are employed to remove alum.

In the September-November period, the Mekong River flood inundates the commune land to a depth of one-and-a-half to two meters, bringing cultivation and animal raising activities to a standstill. To survive, people have to capture wild fish and rely on the help of government and charity organizations.

During the rainy season, sugar cane is grown on knoll areas. One or two rice crops are also grown in rotation with peanuts or maize in this part of the commune. Other choices could be the VAC¹⁰ integrated system, which includes horticulture of banana, papaya, guava, mango, bamboo and vegetables; the raising of freshwater fish such as silver carp, grass carp, tilapia, kissing gourami and Mekong giant catfish; and the raising of buffalo, cows, chickens and ducks. Productivity is again unstable due to

¹⁰ VAC is the Vuon-Ao-Chuong (Garden-Pond-Animal Pen) system, popular in rural Vietnam.

flood risks. Most employment opportunities are available during the dry season after the main crops of the year have been harvested.

Previously, in the dry season, people living in the marshes along the Vam Co Dong River and other wetland and knoll areas suffered from fresh water scarcity. Thanks to irrigation canal systems funded by the government, fresh water is brought from the Vam Co Dong River to major canal branches. Smaller channels have also been built with funds raised by farmers themselves. Thus, to a large degree, water is no longer a problem in the livelihoods of local farmers. Water-borne transportation has also been significantly improved.

Box 3

Making a living in Duc Hue District

Mr Chau Van Manh and his five-member family dwell in Giong (Knoll) area of My Thanh Tay Commune, Duc Hue District. His children study at primary school and the two adults work to feed themselves and the children by rice farming on a 0.88-ha paddy field and by contractual harvesting, pesticide spraying and other activities. The household cannot afford electricity, but they have a small radio. They live on water fetched from canals and ponds. The leaf roof leaks terribly in rains. Vegetables are grown in the home garden during the dry season, but this activity has to stop when the floods come. Mekong giant catfish and climbing perch nursed in ponds are partly home-consumed and partly sold. Mr Chau Van Manh has borrowed 6,000,000 VND from the Bank for the Poor to invest in agriculture and buffalo husbandry. Rice gives them enough food but not enough cash to cover the children's education and healthcare fees.

4.1.3 Agriculture and forestry activities

Water-fed rice farming is the most common type of farming in this area and 2,000 ha of land are planted with rice in two intensive crops a year. Rice productivity is increasing thanks to the help of an extension system which gives technical advice on short-term rice cultivation which is applied by 95% of farmers. Grain production per capita was 1,170 kg/year in 1990 and has reached 2,230 kg/year in 2000.

On Ong Co Knoll, green bean, winter-spring rice and summer-autumn peanut are grown in rotation on 17.5 ha, while the potato growing area is 20 ha. A 40-ha area of the marshes along the Vam Co Dong River is utilized for growing malaleuca.

Major agricultural plants are rice, malaleuca, peanuts and sugar cane. Some farmers who have a stronger financial base, are more dynamic in looking for technical and market information, higher educated and more diligent, will have more opportunities to become well-off by raising cattle, fish, ducks and chickens. VAC is applied on 238 ha.

Farmers who are diligent but lack funds earn their living by working for better-off farmers. Their usual work includes weeding, harvesting rice and peanuts, spraying pesticides and growing malaleuca. Garden owners take up gardening: horticulture of papaya, banana, lemon and orange; cultivation of vegetables; raising of poultry; and fish culture. A few families are involved in non-agricultural activities such as masonry, small trade, weaving bamboo baskets and pads, making brooms and tailoring.

Box 4

Ms Dao Thi Thuy's family

Ms Dao Thi Thuy lives next to a river and has 500 m² of homestead area. Among five people living in her house, three are school children. Rice harvesting, weeding and sugar-cane cutting are the income-generating activities of the family's two main bread-earners. A thick-knife and sickle are their production tools. They have also a black-and-white TV set but it has broken down. The bamboo-framed and leaf-roofed house is about to collapse. No animals are kept. Ms Dao Thi Thuy has not taken part in the commune Women's Union because she is usually out for off-farm activities. The household once received a 3,000,000 VND loan for husbandry and although the due date has not come, this amount was used up when she had an operation. Vegetables for daily meals can only be planted in the dry season. They have no electricity. She hopes to have some money for fish culture investment. They are trying hard to pay back the debt but have no savings yet.

Most of the poor people have neither financial resources nor farming land. Some landholders have no other choice but to pledge their real estate. Poor people also have little access to information and technical know-how or to community organizations.

4.1.4 Infrastructure

The national power network has reached five of six villages of the commune and 75% of households. The water supply system consists of only one well. A red gravel road links the central district town with the commune, and cuts across four of the six commune villages. Of 45 bridges over rivers and canals, seven are concrete and 38 are made of wooden planks.

The four schools are run by 44 teachers and have 24 concrete classrooms. The lower secondary school is to be built soon. Additionally, there are 26 university undergraduates, eight upper secondary pupils, eight vocational learners and 623 primary school children.

The commune six-bed healthcare station is managed by a doctor, a medical assistant and a nurse. The commune market is tiny, and the supply of goods is irregular and insufficient.

4.1.5 Social life

In general, the commune people are poor. In the last few years, consumption markets for rice and other agro-products experienced lowered demand and thus prices also dropped. This, coupled with repeated natural disasters, made it more difficult to sustain rural livelihoods. The commune has to regularly live on government subsidies.

In the commune, there are 325 rich households (19%), 716 better-off (57%), 438 medium (8 %) and 229 poor (21%).

4.2 Outcomes of livelihoods analysis in Thuan Nghia Hoa Commune

4.2.1 Natural resources

Land

Poor people usually have insufficient farming land (see Table 11).

Table 11 Details of village land holdings

Group of farmers/Village	1/3	2/2	3/1	4/4	5/6	Total
Total number of poor households at 5/6 villages	38	16	38	77	46	215/ 299
Number of invited households available	38	16	24	29	46	153
Rice-field owning households	9	9	14	12	33	77
Two rice crops	6	9	14	12	33	74
Partly sold	3	5	-	1	2	33
Currently in pledge	6	9	14	12	33	74
Malaleuca	2	1	2	2	1	8
Garden owning households	3		4		5	12
Currently used for vegetable growing	8	11	20	13	11	63
Papaya						
Pond owning households	18	2	17	7	20	64
Fish pond owners	3	0	1	1	8	13
Ones interested in fish culture	13	6		7	20	46

Half of the poor farmers do not possess any rice fields. They all have homestead gardens and ponds but do not grow plants or culture fish. In some cases farmers have to pledge their farming land to get money to repay debts, or to buy medicines and hospital services when someone in the family has an accident. Even a small area of land is sometimes vital to their livelihoods.

Aquatic resources

Aquatic resources available are shown in priority order in Table 13.

Meteorological and climatic features

Rains and floods are locally typical features that affect the lives of poor people and the availability of their resources. The seasonal calendar in Table 12 shows periods of seasonal activity.

Table 12 Seasonal calendar

Month	1	2	3	4	5	6	7	8	9	10	11	12
Cultured Fish												
Wild fish												
Malaleuca												
Peanut												
Rice												
Flood												
Rain												

In addition to annual flood occurrence, a huge flood regularly happened every 5-7 years in the past but this may now occur continuously for three or four years. Droughts at the beginning of crops and a severe drought with the local name "Ba Chang" cause difficulties and damage agriculture.

4.2.2 Human resources

Poor farmers usually encounter shortages of labor (Table 14), compounded by their own lack of experience and qualifications. A number of interviewees also showed weak motivation. Comprehensive solutions, therefore, should be worked out.

Traditional occupations include masonry, tailoring, and weaving baskets and mats from locally existing materials. Farmers are also experienced in farming on acid-aluminum soil, treatment of alum, capturing wild fish, managing fish nursery hapas and the construction of flood-proof dams in flood season.

4.2.3 Production inputs

Houses are dilapidated, roofed with either *dung* or coconut leaves, and hence very prone to cyclones, floods and heavy rains. The main reason that poor farmers build houses is to shelter from the sun. The proportion of TV and radio owners is about 30%. Many pig sties, even temporary ones, are left abandoned since pig raising is not profitable. (See Table 15.)

Common production tools used by the poor are simple. These include sickles, hoes and shovels. The most important asset is a boat. Some boats are installed with small engines.

Table 13 Aquatic resources in priority order

Practice	Tool	Species	Time	Capacity
Rod fishing	Rod, line, <i>cau re</i> , bait, lamp, raincoat, <i>gio</i> basket	Snakehead, catfish, shrimp, climbing perch	Jul–Nov	5-10 kg/night
Trapping	<i>Lo</i> , <i>lop</i> , <i>trum</i> , fork, lamp, boat, <i>day</i> , trash net, <i>ro</i> basket, <i>let</i> trench	Snakehead, catfish, tiger frog, swamp eel, snake, climbing perch	Jul–Dec	2-10 kg/night
Netting	Net, boat, lamp, raincoat, <i>GIO</i> basket, <i>ro</i> basket	Climbing perch, snakeskin gourami, thac lac, silver carp, snakehead, catfish, yellow mystus	Jan-Dec	5-10 kg/night
Day fishing	<i>Day</i> , net, boat, lamp, raincoat, <i>gio</i> basket, pole, big boat	Linh, climbing perch, white snakehead, long tong, snake, swamp eel, tiger frog	Sept-Nov	
Ghe tre fishing	Big boat, small boat, plank, <i>gio</i> basket, wooden boat	Snakehead	Sept-Dec	3-5 kg
Fish culture	Pond, seeds, feed, care-taking, alum treatment, freshwater	Mekong giant catfish, common carp, giant gourami, tilapia, grass carp, kissing gourami, silver carp, red tilapia	Nov-Jul/Aug	Average bodyweight of harvested fish ranges from 0.3-0.5 kg
Cha fishing	<i>Truc</i> , boat, <i>ro</i> basket, water hyacinth, <i>gio</i> basket, net	Climbing perch, snakeskin gourami, shrimp, catfish, snakehead	Feb-Jul	5-10 kg

Table 14 Human resources per household

Village	1/3	2/2	3/1	4/4	5/6	Total
Total number of poor households at 5/6 villages	38	16	38	77	46	215/229
Number of invited households available	38	16	24	29	46	153
Labor per household						
One-laborer households	5	5	11	8	8	37
Two-laborer households	23	9	7	15	23	77
More than three-laborer households	3	1	2	4	12	22
Traditional occupation practitioners						
Masonry	6	1				7
Tailoring	3	1				4
Bamboo pad weaving	1	0	2	2	2	7
Bamboo basket weaving	1					1
Professional fishing		1			11	12

Table 15 Assets per household

Group/Village	1/3	2/2	3/1	4/4	5/6	Total
Total number of poor households	44	24	43	76	60	247
Number of invited households available	38	16	24	29	46	153
1 Boat owning households	7	10	20	14	18	69
Engine boat owners			2	0	6	8
2 Pig-sty owning households	10	0	3	3	1	17
Pig raisers	2	0	0	0	0	0
3 Bicycle owning households	7	4	15	25	46	97
4 Electricity users	20	5	10	2	17	54
5 TV owners	8	0	10	4	10	32
6 Radio owners	13	4	7	6	12	52
7 Families with tile-roofed house	25	8	15	10	14	72
8 Families with altar cabinet	12	4	11	11	14	52

4.2.4 Social resources

The Commune HEPR Officer is closest to poor people. The Commune Authority always gives consideration to poor people. Mass organizations are relatively attached to poor people. The Veterans' Association is not close to poor people and the agricultural extension is far away. (See Figure 2.)

4.2.5 Financial resources

Poor families have hardly any savings and usually fall into debt. Two main sources of financial support exist: the government's employment generation fund for poor people and HEPR loans from the Bank for the Poor, which have been delivered to a total of 88 households through mass organization projects. Each household receives one to six million VND.

Currently, nearly 7 ha of land is in pledge, belonging to 16 households and valued at 77 million VND. "Houses for the poor" have been built for 99 families. Additionally, 14 cement panels and four concrete poles at a cost of 2.5 million per household have been given to others.

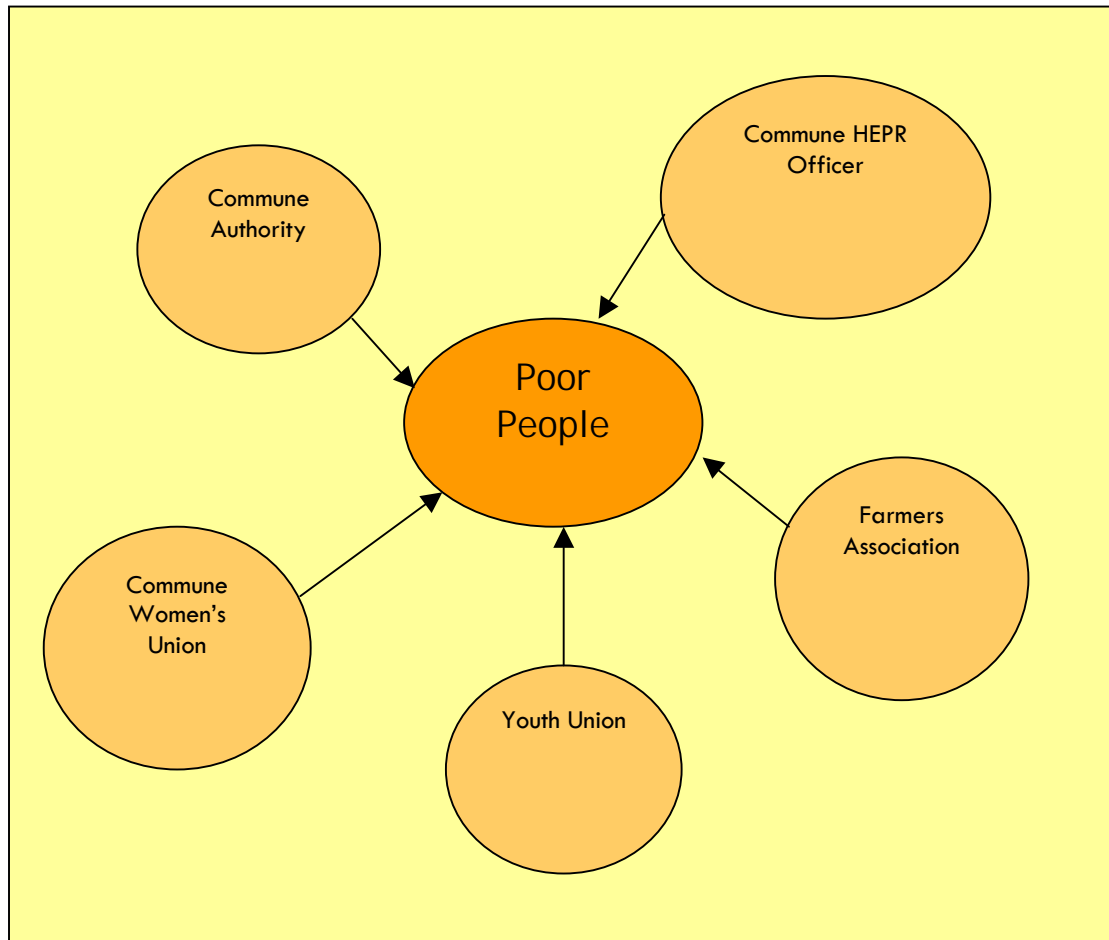


Figure 2 Organizations supporting people in My Thanh Dong

4.2.6 Risks and other impacts

Year-round risks

Table 16 shows seasonal frequency of natural disasters which have affected people's lives.

Other risks

Other risks (Table 17) include:

- Environmental hazards: pesticides, waste from the sugar processing factory, dead animals in flood season
- Salt intrusion, although this is less severe at the peak of dry season, from February to April
- Aluminum level in the soil: the highest aluminum level in the soil is at the beginning of the rainy season, and
- Other hazards including rat poisons, poisonous snakes and others.

Table 16 Seasonal frequency of natural disasters

Year	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
Golden snail											
Rat											
Brown leaf-hopper											
Cyclone											
Salt intrusion											
Drought											
Huge flood											
Annual flood											

Table 17 Other risks affecting households

Group/Village	1/1	2/3	3/1	4/4	5/6	Total
Total number of poor households	38	16	38	77	46	215/ 229
Available households	38	16	24	29	46	153
Accident-affected households	2		3	1	2	8
Disease-affected households	5	3	3	3	9	20
War-affected households	2	3	1		3	9
Families of cyclone-hit houses	1	3			1	5

Impacts of externally determined policies

Several externally determined policies have assisted poor people in this commune (Table 18):

- Houses for disadvantaged revolutionary families: 18 million VND (in total)
- Houses for poor people: 2.5 million/house
- Two houses of 5.5 million VND each were sponsored by the Headquarters of the 9th Military Zone.
- 14 houses of 8 million VND were built by the Red Cross Association.
- Three houses of 9 million VND each were provided by an organization from Luxembourg.

Table 18 Impacts of external policies

Group/Village	1/1	2/3	3/1	4/4	5/6	Total
Total number of poor households	38	16	38	77	46	215/229
Available households	38	16	24	29	46	153
HEPR loan recipients	20	11	8	14	23	76
"House for poor" owners	15	8	9	9	13	54
Corrugated iron-roofed house owners	25	8	15	10	14	72

5. CONCLUSIONS

5.1 Major features of livelihoods in the two communes

Natural resources are plentiful. Fertile soils are enriched annually by river silt. For poor landholders, if investment is sufficient and judicious, they will be able to escape from poverty. Floods are dangerous, but aquaculture could benefit from this natural disaster.

The main constraints for poor people are lack of funds, production facilities, education and technical skills. Living in remote areas and difficult living conditions prevent them from accessing information flow on techniques for farming, cultural and social development, as well as government policies.

Poor farmers have received some government assistance, however:

- Policies have not been implemented in all poor communes.
- Poor people are not often allowed to borrow bank loans since they do not have properties to mortgage.
- The Bank for the Poor and the Government's Employment Generation Fund could provide trust funds for farmers via mass organizations, but again the funds are stretched and inadequate in the short-term and delivery does not usually catch up with the production cycle. Another problem is the high interest rate: the Bank for the Poor has not allocated any more loans for Thuan Nghia Hoa Commune, because its accumulated debt is over VND 100 million.
- Few poor farmers are able to benefit from extension services. The extension system usually places priority on already practicing producers rather than poor people.
- No consumption market or processing sites are available for either rich or poor people to sell their produce.

5.2 Findings from livelihoods analysis

Generally speaking, poor people are disadvantaged in terms of land, credit, labor, knowledge and information and are often exposed to risks. They are also less likely to be beneficiaries of social welfare, and so government and non-governmental assistance is highly required.

To help poor people fight poverty, a comprehensive and concrete viewpoint should be obtained. They should be offered alternative livelihoods options which can be adapted to their circumstances, following the principle of "giving people the fishing rod and teaching them how to

fish, providing them with bait and introducing market places for produce sale”.

It is important to bring into play poor people’s full potential in cooperation with government and NGO support and donations to enable poor people to utilize existing resources to be free from hunger and have sufficient nutritious food.

In parallel with poverty reduction, rich and medium people should be encouraged to become better-off. This would provide an impetus for poor people to strive to escape from their present status.

Tables 19, 20 and 21 contain a summary of data relating to resources available to poor people. This was gathered during the livelihoods study and is the basis on which we have made recommendations in a portfolio of projects aimed at improving the livelihoods of poor people.

Table 19 Prioritization matrix of key occupations feasible for people in Thuan Nghia Hoa

No	Occupation	Value					Average	Rank
1	Rice cultivation	4	5	5	5	4.8	V	
2	Pig raising	3	4	4	4	3.8	IV	
3	Duck and chicken raising	2	3	3	3	2.8	III	
4	Fish culture and fishing	1	1	2	1	1.3	I	
5	Gardening (vegetables and fruit trees)	5	2	1	2	2.5	II	

Table 20 Prioritization matrix of key occupations feasible for people in My Thanh Dong

No	Occupation	Value					Average	Rank
1	Rice cultivation	8	8	6	6	6	6.8	IV
2	Buffalo and cow raising	10	10	10	8	8	9.2	I
3	Duck and chicken raising	4	4	6	4	6	4.8	VI
4	Pig raising	6	6	4	6	4	5.2	V
5	Fish culture	8	6	8	8	10	8.0	II
6	Gardening (vegetables and fruit trees)	6	8	8	6	8	7.2	III

Table 21 Agriculture and fisheries resources in Thuan Nghia Hoa and My Thanh Dong Communes

Activity	Scale of production	Possible benefits for poor people	Development trend	
			Advantages	Disadvantages
Rice (summer-autumn and winter-spring crops)			Experience Government's financial support Plenty of production input suppliers	Difficult to sell produce Low productivity Pests Droughts Floods Limited funding
Land-working	Machinery	No		
Care-taking	15-20 days of manual work	Employment opportunities		
Harvesting	15x2 = 30 days of manual work			
Peanut			Experience Knolls suitable for peanut growing Financial support Good soil condition	Pests Only applicable for knolls but not low-lying areas
Land-working	Machinery	No		
Partial harvesting	12x2 = 24 days of manual work/ha	Employment opportunities		
Uprooting	70 days of manual work/ha			
Malaleuca			Free from flood risks Environment High profits Easy to sell produce	High and long-term investment
Planting		Employment opportunities		
Care-taking				
Harvesting				
Gardening			Experience Techniques are easily adopted Availability of homestead garden Easy to sell produce	Lack of seedlings Flood-prone Low education level
Vegetable	Family's manpower, all year round	Regular labor required		
Fruit trees				
Other perennial plants				
Husbandry			High profitability Availability of natural feed Experience Good habitat for poultry	High investment Techniques Difficult to sell Limited funding
Buffalo and cow raising	Family's manpower, all year round	Employment opportunities		
Pig raising				
Chicken and duck raising				
Fishery			Availability of ponds Experience Availability of natural feed Possibility to take advantage of labor	Techniques Seeds Consumption markets Fund
Fish culture	Family's manpower, all year round	Employment opportunities		
Wild fishing				
Fish-drying and fish-sauce making				

6. RECOMMENDATIONS

6.1 Recommendations related to state and central agencies

In the long term, there should be strategies on HEPR and job creation for farmers and fishers, commencing with the HEPR strategy for aquaculture and fisheries development. This should involve the participation of farmers, fishers and poor people, and should have a strong base created by proper evaluation of farmers and fishers' resources, needs and risks, as well as of problems and constraints of current policies on supporting poor people.

A network of qualified staff and volunteers, both full-time and part-time, should be established and given responsibility for communication, evaluation of analyses on poor people's livelihoods, and formulation and implementation of projects. It would be advantageous if this network could include the officers trained by DFID-SEA in Thai Nguyen and Quang Tri, since it would reduce the cost of further training for new counterparts for DFID-SEA.

A market information system and information transfer systems for fish capture, culture and processing technologies should be established, appropriate to the local conditions of farmers and fishers so that they are able to produce enough fish for food and income.

6.2 Recommendations related to provincial authorities

In the implementation of the on-going HEPR program, there should be a HEPR sub-program relating to the utilization and conservation of natural aquatic resources in the flood season to support the livelihoods of poor people.

A separate budget component should be allocated for HEPR and job creation with appropriate mechanisms and organizational structure. Provincial officers should be given the opportunity to voluntarily join the above-mentioned network without any pressure.

Socialization of HEPR and job creation should be conducted to enable all sectors, institutions, organizations and individuals to contribute to this cause according to their ability. Mass organizations should take a leading role in awareness-building and monitoring of performances by functional agencies.

Capacity should be built within the Provincial HEPR Steering Board to ensure better organization and effectiveness. In particular, policies should be made at provincial level regarding:

- Improvement of credit systems to give more access to funds to poor people. Funds should not be distributed to all but to effective and efficient models and projects only, based on the needs and capabilities of each farming household category.
- Projects focusing on the provision of long-term and low-interest loans for poor people should be established, so that poor commune members can claim back land in pledge.
- Projects focusing on provision of agriculture and forestry services, including vocational training, for poor people should be established.

6.3 Recommendations related to district and commune levels

There need to be HEPR models that are suited to the aspirations and capacities of each farmer group. This will help enhance poor farmers' entrepreneurship. Awareness generation should be flexible with different types of community organizations. A "household by household" method is better than an even spread of funds and a bottom-up approach should be applied. Dissemination of successful models has a more persuasive effect.

Kindergartens and classes for poor children should be opened in the flood season.

6.4 Recommendations related to government, Research Institute for Aquaculture No 1 and the DFID-SEA Program

Further research should be continued in formulation of pro-poor projects in the two communes of Thuan Nghia Hoa and My Thanh Dong, so that poor farmers and fishers are able to reduce poverty themselves through aquaculture. Local authorities are ready for cooperation. Recommended projects include:

- Establishment of a volunteer network for poverty reduction through aquaculture
- Provision of low-interest credit funds that have simpler borrowing procedures for poor people
- Fisheries and aquaculture extension for poor people
- Fisheries product processing and marketing
- Vocational training for poor people
- Promotion of wild fish capture in rotation with fish culture in flood season
- Claiming back land in pledge for poor people, and
- Improvement of infrastructure in poor communes.

Appendix 1 Demographic information on the two communes

Item	Unit	Thuan Nghia Hoa	My Thanh Dong	Remarks
Total area	ha	3,539	3,268	
Winter-spring rice crop area		2,069	2,115	
Summer-autumn rice crop area		1,300	1,900	
Peanut area			17.5	
Potato area			20	
Malaleuca area		1,000	41	
Sugar cane area			11	
Garden area		150	238	
Intensive aquaculture pond area		15	13	1/2 of households are pond owners
Population and labor				
Number of households		1,224	1,708	
Labor	person(s)	3,110	4,140	
Education				
Schools		7	4	Built from concrete
Classrooms		33	24	
Primary school children	person(s)	835	623	
Healthcare				
Number of healthcare stations		1	1	
Number of physicians	person(s)	1	1	
Electricity				
Electricity users		341	1,252	
Percentage	%	35	73.3	
Villages connected to national power network		5/5	5/6	
Number of clean water wells		10	01	
Transport				
Red-graveled roads (earthen)	km	11	10.2	
Number of concrete bridges			07	
Number of wooden plank bridges			38	
<i>Khi</i> (one bamboo-stem) bridges		20	0	
Main transport means		boat	boat and bicycle	bicycle
Housing and wealth-ranking				
Brick-walled house owners (rich)	no/ percent	82/15%	325/19.2%	
Corrugated iron-roofed house owners (medium)	no/ percent	888/64.3%	716/41.9%	
Leaf and bamboo house owners (poor)	no/ percent	254/20.7%	667/38.9%	
Number of loan borrowing households				
Production loan holders		1,200	1,115	
Overdue loan holders				
Agriculture Bank loans	households		3	
Bank for the Poor loans	households		12	

Appendix 2 Poverty data of the two communes

Item	Unit	Thuan Nghia Hoa	My Thanh Dong
Number of households	household/ population	254/1.076	229/955
Ba Luong/1st village		20/82	36/166
Nhon Xuyen/2nd village		19/76	17/67
Tra Cu/3 rd village		26/15	38/139
Vuong Xoai/4th village		30/133	75/306
Vam Lon/5th village		27/145	4/18
6th village			59/259
Labor	person(s)	256	417
Land area	ha	25	67
Farming land	ha	19	54 (3.35%)
Households without farming land		22	58
Households without residential land		8	18
Occupations			
Rice cultivation	households	100	153
Contractual work	households	122	58
Mason, barber, vehicle-mender	households		4
Street vendor, tea shop owner	households	4	5
Fish seed seller	households		1
Average education level	grade	5	3
"House for the poor" beneficiaries	households	15	99
Project loan recipients			88
"Free house for poor" owners			92
Corrugated iron (for roof) receivers		11	07
Households whose land is in pledge		5	16
Area/value	ha/million VND	1.5/15	6.9/77.8

Appendix 3 Expectations of the livelihoods analysis team

The expectations of the livelihoods analysis team were:¹¹

- Try to collect more information on poverty (7)
- Transfer technologies to poor people (8)
- Interventions to improve the livelihoods of poor people and empower poor people in their communities (4)
- Understanding of poverty-related issues (3)
- The interviews created better awareness of PRA for the team (1)
- Quick formulation of project (10)
- Continue with the learning process to support poor people (3)
- Help poor people make themselves free from poverty; support of organizations, state organizations, international agencies, Research Institute for Aquaculture No 1, community and society, are all needed (4)
- Poor people need credit and technical assistance from the government and donor organizations (8)
- Continue cooperating with DFID-SEA (10)

¹¹ The numeral refers to the number of individuals who had that expectation.