

APPENDIX I : SOCIETY AND ORGANIZATION

APPENDIX-I SOCIETY AND ORGANIZATION

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I.1 Introduction

I.1.1 Summary of Field Work

The main objective of the study is to clarify the present conditions of rural society and farmer's organizations and to suggest the plan of strengthening and expansion of farmers' organizations in the Study Area. Overall field survey on rural society and farmer's organizations concerned in the Study Area was carried out and physical conditions and problems were found. Farmers, cooperative members and local officers were interviewed to collect information and to learn their ideas and opinions.

I.1.2 Summary of Plan of Farmer's Organizations

Based on the results of field survey and analysis of present condition, target and strategy were proposed for farmer's organization in the Study Area. According to the development concepts, the development objectives for farmer's organization are set as establishment and strengthening of farmer's groups based on each sector's expected activities to be implemented by the groups. The target by the year 2010 is about 50% participation of the farmers to the organization and they will be model groups to be applied to all over the area. The final target is 100% of the regional farmers who will join the organization and be trained. In order to achieve these targets, training and education are necessary for both of government staff and farmers.

I. 2 General Feature in the Study Area

The following information is based on the results of the "Socio-economic Survey of the Rural Households" carried out in May-July 1999, covering 50 communes in the Study Area.

I.2.1 Living Conditions in General

31 communes among the total surveyed 50 communes were established since 1976. This proved that the exploitation of Dong Thap Muoi area concentrate on the period of recent 22 years. It is a short period compared with the history of reclaiming Dong Thap Muoi area.

The average number of inhabitants per commune is 9,650. Among the total population, the share of men is 49.2% and that of women is 50.8%. The Kinh people as an ethnic group shares 99.2%, the Khmer and Hoa (Chinese) occupies only 0.8% of the total surveyed population. The Khmer people are living only in Tan Hong and Hong Ngu Districts in the surveyed communes.

The number of the poor households is 13,831, accounting 14.1% of the total interviewed households.

The highest number of the poor households is found in Hong Ngu District of 2,650 households, followed by Tan Hong District of 1,894 households and Cao Lanh District of 1,888. The lowest number is in Thanh Binh District of 1,122 households.

The temporary houses are still found with high percentage in the surveyed area, especially in Thap Muoi, Cao Lanh, Cai Be and Cai Lay Districts. In general, the houses in the Study Area are considered to be a big problem. Since 1995 the government of Viet Nam has established the Banks for providing loan especially for inhabitants to build houses in the flooded area. However, the local inhabitants have not utilized this loan system and spent very little investment for building stable houses, because of the poor economic condition and the way of living that is dependent on the natural condition.

40% of the surveyed communes have roads available for cars to the PC offices. They are concentrated in the Districts of Cai Lay, Cao Lanh, and Thanh Binh. The remaining communes mainly use waterways by system of canals, rivers and creeks. That's why the transportation of products, goods, and passengers are facing many difficulties, particularly in flood season. The road transportation is still insufficient and not developed uniformly in the Study Area. This is one of the big constraints for the production and life of the people in the area. Common transportation facilities in the surveyed communes are bicycles, motorbikes, junks and boats.

62% of the total surveyed communes have pre-education schools. All communes have primary schools, 35 communes have secondary schools (70% of the total surveyed communes), only 2 communes have high schools (4% of the total surveyed communes). However, the important problem is the low quality of the schools. 50% of the schools are the temporary ones and the rest are semi-stable and stable. All of the educational facilities such as lights, teaching materials and tools, libraries, etc. are not sufficient and cannot satisfy the requirements of the local people.

47 communes have health stations, accounting 94% of the surveyed communes. But these stations face the lack of medical treatment tools and medicines, and doctors. Therefore, the patients are often sent to the health centers of the district or the provincial hospital.

Environment is a noticeable problem among the inhabitants because of the existence of many rivers, canals, ponds, etc, and flooding every year. For producing 2-3 rice crops/year, farmers use many kinds of pesticides and herbicides. There are still many households using simple toilets (49.1% of the interviewed households) and discharging into fishponds and/or waterways. All these activities together have caused the environmental pollution.

I.2.2 Household Economy

In particular, there are 14.6% of the total interviewed households with extremely shortage of rice for self-consumption while the average per capita paddy is very high. Therefore, the security of foodstuff should be paid more attention. The rate of households with enough rice is the highest in Thap Muoi District (91.4%), the lowest is in Tam Nong District of 68.3% of the total interviewed households.

Average yearly production values of the households in the interviewed communes and districts are very much different. The highest rate is 57.7 million VND/household/year, the lowest is 24.1 million VND/household/year. Average net income is 13.9 million VND/household/year. The highest income can be seen in Tan Hong District, 20.9 million VND/household/year and the lowest household in Thanh Binh District of 4.5 million VND/household/year. Average monthly income per person is 194,730 VND and the lowest net income is only 62,830 VND/person/month. The income of household comes mainly from cultivation of rice and fruit trees. Livestock is less developed and the income from forestry is also very little. Therefore, in order to increase income, the intensive farming for increasing yield and increase of quality of products are necessary.

The yearly expenses of the households are very much different. The average expenses of the interviewed households in Tam Nong District is the highest of 62.2 million VND/household/year, while that in Cai Be District is only 22.3 million VND/household/year. Average expenses for daily life of 481 interviewed households is about 177,980 VND/person/month. Among them, 121,700 VND/person/month is spend for food, of which 26.7% is buying food-grain and the 41.7% is for buying other foodstuff.

Similar to this, the expenses for production between interviewed households is also big different. Average expense of 53 households in Tam Nong District for production is 46.3 million VND/household/year. In the meantime, the average rate of 50 households in Cai Be District is only 13.6 million VND/household/year. Average expense for production is 25.1 million VND/household/year (66.4% of the total expenses for 1 year of the household, 37.8 million VND/household/year).

Average saving amount of one household per year is 1.2 million VND, occupying 8.5% of the average yearly income of household. However, this saving amount is also big different among interviewed households in different communes and districts. Hong Ngu District shows deficit of 0.43 million VND/household/year. The average saving rate of 49 households in Tan Hong District is the highest, 5.9 million VND/household/year. The largest deficit of the households of 23.5 million VND/year is found in Tam Nong District. The households with no savings are existing in all of the surveyed communes and districts. This means that the income gap between farm households is increasing more in the Study Area. Therefore, assistance is needed for the poor households to reduce the disparity in income and

saving and to contribute to reduction of the poverty.

I.2.3 Land Tenure

Average household has 4.9 members and has average cultivated land area is 2.6ha/household. The largest area of the average cultivated land per household of 3.2ha is found in Tan Hong District and the smallest of 1.1ha in Cai Lay District.

There are 7,150 households without agricultural land which shares 7.2% of the total households in 50 surveyed communes. Among them, the largest number is found in Cao Lanh District of 1,235 households, followed by Tan Hong District of 1,220 households and 220 households in Cai Lay District.

I.2.4 Farmer's Organization

There are many kinds of groups in the Study Area. For example, Farmers' Associations have been established in 96% of the all surveyed communes, with 45,485 members. Women Unions have been established in 92% of the surveyed communes with 27,198 members. Gardening Associations were established in 8 communes, with 2,538 members (only in Cai Lay, Cai Be and Cao Lanh Districts). In general, the operation purpose of the organizations is to help each other for the socio-economic development of the inhabitants in the area, reduction of the poverty through improving knowledge and experiences on cultivating rice, fruit trees, raising animals as well as increasing role and responsibility of the community. However, because of the poor developed infrastructure and living condition, the people have concerns more with problems of their own production and businesses. Moreover, available funds and facilities for the activities are very limited, then the operation effectiveness of the organization is low and still less impact on the social and economic development of the community.

18 communes in the 50 surveyed communes have established production collectives and total members are 23,045 farmers. 6 communes have established 6 economical cooperation groups with 529 members. Average number of the members in each cooperation group is 88 persons. Considering the total 239,724 agricultural labors in 50 surveyed communes, the number of farmers participated in the agricultural production organizations is only 11.5%, which is very low.

(1) Cooperatives in the Study Area

The operation of the existing cooperatives is concentrating on providing members with good services related to production inputs and outputs. Main activities are;

- Responsible for the land preparation (by machine) for the households on time with agreed price and technical requirements,

- Exchanging labors for agricultural activities,
- Consulting and providing seeds of rice and fruit trees for the cooperative member households,
- Supplying fertilizers, fuels and pesticides,
- Pumping and draining water (water control services),
- Responsible for borrowing credit loans for the farmers to buy agricultural material inputs,
- Some cooperatives seeking market for selling main products,
- Organizing training on transferring production techniques to the members.

However, since the cooperatives have just established 1-2 years ago, their abilities are not strong enough, and their operation ca not bring the expected results yet.

The table in the following page shows the situation of the existing cooperatives in the Study Area.

**THE STUDY ON INTEGRATED AGRICULTURAL DEVELOPMENT PLAN
IN THE DONG THAP MUOI AREA VIET NAM FINAL REPORT**

Table (1): Situation of Cooperatives

Name of Cooperative	Location (Address)	Background of Establishment/ Major Activities	Date of Establishment	No. of Total Member	Total Farm Land Area (ha)	No. of Total Stock (stock)	Unit Amount of Stock (dong)	Total Stock Amount (1,000 dong)
1. An Phu (Agricultural Cooperative)	An Long Commune, Tam Nong District	- Capital from reserved sources of the former collective and the contribution of the collective members - Services of irrigation and fertilizers	6-Oct-98	519	413	4,131	1,460	6,031,260
2. Phu Tho (Agricultural Cooperative)	An Long Commune, Tam Nong District	- Irrigation and drainage - Supplying material and means	21-Oct-98	579	369	579	17,700	10,248,300
3. Gao Giong (Agricultural Service Cooperative)	Hamlet 2, Gao Giong Commune, Cao Lanh District		5-May-98	107	651	5,435	20,000	108,700,000
4. Binh Trung (Agricultural Cooperative)	Binh Trung Hamlet, Binh Thanh Commune, Thanh Binh District	- Pumping service for members - Internal credit - Pumping fuel service for deficient members	18-Dec-98	1,003	810.4	8,104	25,000 per 1,000m2	202,590
5. Binh Hoa (Agricultural Cooperative)	Binh Hoa Hamlet, Binh Thanh Commune, Thanh Binh District	- Cooperating - Agricultural services	19-Sep-98	725	558.2	725	50,000	246,157
6. Tan Thong Nhat (Agricultural Cooperative)	Phu Thanh B Commune, Tam Nong District	- Providing service on irrigation and drainage	1997	8	815	8	62,500	500,000
7. My Dong (Agricultural Service Cooperative)	My Dong Commune, Thap Muoi District	- Providing service on irrigation and drainage	Nov-98	15	-	40	5,000	200,000
8. Thap Muoi (Agricultural Service Cooperative)	My An Town, Thap Muoi Commune, Cao Lanh	- Providing service on irrigation and drainage	Oct. 1998	9	410	48	5,000	240,000
9. Quyét Tien (Agricultural Service Cooperative)	Phu Cuong Commune, Cai Lay District	- Irrigation and drainage	28-Aug-98	65	80.5	850	30,000	25,500,000

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Name of Cooperative	Location (Address)	Background of Establishment/ Major Activities	Date of Establishment	No. of Total Member	Total Farm Land Area (ha)	No. of Total Stock (stock)	Unit Amount of Stock (dong)	Total Stock Amount (1,000 dong)
10. Loi Thuan	My Loi B Commune Cai Be District	- Agricultural services - Services of water supply for daily use	30-Sep-99	350	900	-	-	-
11. My Duc Tay	My Duc Tay Commune, Cai Be District	- Agricultural services - Supplying water for daily use	26-Sep-98	310	350	-	-	-
12. My Duoc	Hau My Bac B Commune, Cai Be District	- Agricultural services - Supplying water for daily use - Services of water pumps	20-Mar-99	188	600	-	-	-
13. My Thanh	My Thanh Hamlet, Hau My Thanh Commune Cai Be District	- Supplying water for daily use	14-Nov-98	65	-	-	-	-
14. My Hoa	Hoi Cu Commune, Cai Be District	- Supplying water for daily use - Supplying agricultural inputs	20-Mar-99	62	120	-	-	-

(unit: 1,000 dong)

Name of Cooperative	Total Economic Situation		Irrigation Service		Fertilizer Supply Service			Internal Credit Service		
	Income	Expenditure	Income	Expenditure	Income	Expenditure	Profit	Income	Expenditure	Profit
1. An Phu	961,153.00	739,294	513,343	335,838	438,105	403,455	34,650	-	-	9,705
2. Phu Tho	727,484	614,072	410,496	312,384	316,988	301,688	15,300			
3. Gao Giong	578,400	288,849	578,400	288,849						
4. Binh Trung	523,115	414,438	106,361	38,071	86,809	66,367	20,442	329,945	310,000	19,945
5. Binh Hoa	1,307,152	1,199,144	322,044	221,797	47,854	42,065	5,519	806,097	766,507	39590
6. Quyet Tien	1,036,025	1,015,438	20,587		1,036,025	1,015,438	20,587			

Table (2) : Situation of Cooperatives

Table 2: Situation of Cooperatives (3)

Name of Cooperative	Net Profit(dong)	Usage of Funds (dong)		
		Reproductio n	Social Welfare & Amending	Distribution to Members
1. An Phu	108,728,873	19,570,000 (60%)	8,156,000 (25%)	65,238,873
2. Phu Tho	113,412,000	25,517,700 (60%)	5,103,900 (25%)	79,388,400
3. Gao Giong	289,500,000	28,955,000 (60%)	14,477,000 (25%)	237,431,000
4. Binh Trung	42,549,000	14,892,185 (60%)	2,127,455 (25%)	21,274,550
5. Binh Hoa	118,008,240	41,302,968 (60%)	5,900,424 (20%)	59,004,240
6. Quyet Tien	20,587,000	11,817,000 (60%)	-	270,000

(2) Farmer's Opinions on the Organizations

There are some opinions on the organizations among farmers and governmental staff.

The advantages of the organization considered by the local people are;

- Helping households to intensify production, increase crop yield, through providing enough seeds, land preparation services, fertilizers, and irrigation water according to the technical requirements.
- Increasing production skill of the farmers, through training and extension services.
- Investing in the construction of dikes and purchase of production tools.
- Avoiding situation of borrowing high interest loans,
- Improving quality of the products,
- Helping each other in performing well economic activities and reducing poverty.

The disadvantages are;

- The services for selling agricultural products are not well performed and do not impact on the income and production.
- Effectiveness of the regulation and utilization of the production tools and labors is not high.
- Executive skills and ability of the management board of the cooperatives, collectives or production groups are still weak, and their impacts on the socio-economic development is not very clear.

Evaluation of Farmer Interest Groups (FIGs) in Dong Thap Muoi was carried out under the Extension Program ISA/FOS/DTM Project during 1997-98. Main approach is to train farmers in the area.

The members of the FIGs, when asked about their suggestions for FIG establishment, gave the following opinions:

- Group objectives have to be discussed very clearly at the start of the group
- Groups only should start at the request of the farmers themselves
- More people should be invited at the first meeting than the final target of 20, as many farmers may drop off after the group objectives have become clear
- Small FIGs are not bad; if successful, more farmers will join
- About collaboration with the village leaders, the opinions are divided; the FIG leaders think it is important that village leaders and hamlet leaders know well what the FIG is doing; the members are more reserved, and some do not see the advantage, if the local leaders are not interested to come to their meetings.

(3) Successful Cases of Cooperatives

There are many successful and active cooperatives in Long An and An Giang Provinces which are out of the Study Area. The reasons for many successful cooperatives in these provinces are considered as follows.

- The concentrated instructions of the authorities at all levels from the province to the grass-root level have been provided. Additionally, the government has given the assistance of the sectors in the establishment of the new cooperative model, the advocacy and propaganda on the Cooperative Law and other government's decrees on cooperative. These governmental efforts have helped farmers aware the production practice of the new style cooperative.
- The farm households have realized that the cooperative is actuality needed for their production and lives. Since the business production plans of the cooperative are consulted and prepared by the cooperative's members actively and democratically, farm households can support and actively implement all activities of the cooperative.
- Staffing (management staff) is a decisive factor for the success or failure of the cooperative. Experiences from good operating cooperatives show that one reason for the success is firstly the existence of the capable staff suitable to the situation of market economy. And also the staff is trusted by the farmers and trained well on the management field.
- The cooperatives can change their services, with consideration of the benefit according to the market mechanism. They always focus on the development of the household's economy, performing additional jobs to create employment opportunities and increase income for the cooperative's members.
- The local authorities have understood well (correctly) the Cooperative Law and the necessity of establishing the new cooperatives. The local authorities have paid attention to help cooperatives. Some PCs of the district, town, etc. have supported funds, created favorable condition for the good operation of the newly established cooperatives.
- Inputs of the enterprises to the cooperatives during process of production and business have been provided. The food company of the province was interested in the model of the economical cooperatives. In concrete, the company had provided investment funds to 5 cooperatives to do the services, such as purchasing pumps, rice cutting machines, dryers, etc. and providing fertilizers.

The establishment of the new cooperatives in An Giang and Long An Provinces is based on existing economic cooperation groups. Economic cooperation groups are the kind of organization for the farmers to practice to be familiar with the general management works also to create confidence and responsibility of farmers for the collective production. The new established cooperatives according to the law based on the economic cooperation groups have well operated in the past years. These cooperatives have a possibility to develop well in the future. In the present

economic situation, the simple cooperation groups of the farmers are still popular and have positive impacts on the agricultural and rural development. This fact is the strong foundation for the development of the cooperatives in the near future.

(4) Extension Club

There are many extension clubs working, which are also considered to be expanded and strengthened. Extension club is a professional group of farmers established for the following purposes,

- Increasing technical skills of the members in the agricultural production in order to achieve high efficiency.
- Increasing mutual cooperation among members in the development of production (cultivation, animal raising, fishery) of the family and collectives.
- Creating initial condition for constructing specialized areas for producing breeder plant and animal in the locality.
- Discussing the way of solving difficulties such as the production plan, seeds production, cultivating technique, animal raise, etc.

The total number of the extension clubs in Dong Thap Province is 105 with 5,000 members. There are 500 members and 965 members of the extension clubs in Cai Lay and Cai Be Districts respectively.

Number of Extension Clubs

District	No. of Clubs
Hong Ngu	3
Tan Hong	6
Tam Nong	15
Thanh Binh	7
Cao Lanh	18
Thap Muoi	13
Cao Lanh Town	12
Cai Lay	14
Cai Be	24

The club members have to prepare production plan by the family, to specify technical measurement to be applied and the time for implementing plan. These items have to be written down in the production book of each member. Management board has to instruct members in preparing and implementing this plan.

The operation fees are provided by the government. Operating regulation is prepared with help of the extension center. During the first 6 months after establishment the club, one meeting is held every month. In each meeting, the club receives 100,000 VND from extension center as

organization fee. After 6 months, the club can use funds contributed by its members.

The number of the members in the extension clubs in Dong Thap Province who have been trained in 1998 is 39,000, of which 6,000 were trained in the district. Expense for one member participating one training course is 8,000 VND/person. In 1998, 112 training courses were organized in Cai Lay District and the number of trained persons is 3,500. In Cai Be District, 120 courses were provided for 480 members in 1998. Main activities are as follows. The major subjects of the training depend on the requirement of each club.

- Training of techniques of rice cultivation, gardening, animal raising, and fishery
- Visiting to the other clubs
- Producing documents
- Organizing workshops/seminars
- Introduction of the model groups

(5) Governmental Support for Cooperatives

1) Credit policy for the development of cooperatives

For the cooperatives doing business production, the following credit system will be applied depending on the concrete situation.

- To ensure the loans according to the bank's regulations
- To use assets of the members of management board as guarantee for the loans
- To use assets formed from loans as guarantee for the additional loans, but the maximum amount of loan should be equal to the own funds of the cooperatives

2) Strengthening and development of economic cooperation groups and cooperatives in Tien Giang Province

PC of Province instructs the sectors and all of the management levels to concentrate on the implementation of some detailed activities as follows;

- The sectors and management levels to learn thoroughly and disseminate to the mass of people the guideline of the party and government on the construction of the cooperative and economic cooperation models.
- The sectors and management levels prepare plans for strengthening the existing cooperatives and economic cooperation groups. Based on their operating situation, some of them have favorable condition and are operating effectively, and are supported by the members. They will be changed to the new cooperative according to the Cooperative Law.
- The newly established cooperative should be an economic unit, operating equally with other type of enterprises in the market mechanism. The authorities at all levels do not interfere deeply in the internal affairs of the cooperatives.

- According to the Cooperative Law, the operation of the cooperatives is not limited by the administrative boundary. PC of Province gives responsibility to the council of the cooperative federation to cooperate with Department of Agriculture and Rural Development (DARD) and Trade Department to organize the implementation of the model. Each district will establish one cooperative specializing in selling agricultural products from farmers and supplying production materials directly to the producers depending on the actual situation and demands.

3) PC of Dong Thap Province

The cooperative development has had rather good development step, and many cooperatives after they were established or changed from old collectives had operated effectively. However, because of many reasons, such as the lack of detailed instruction from the central government, the lack of clear division of responsibility of different sectors in the implementation, there is not enough attention and interest among the authorities and social associations. This is the reason why the cooperative development is still slow and do not satisfy yet the practical needs of the cooperation in the construction and strengthen of the production relationship.

In order to support for cooperatives development, PC set up implementation plan as follows.

- Some principles should be thoroughly understood. For example, the organization at all levels and sectors should realize the importance of the cooperative economy. During the first stage of the cooperative development, the establishment should be started in the area with suitable conditions only and will be developed step by step.
- Orientation of the cooperative development should be provided to some important sectors. For example, in agricultural sector, in order to satisfy the needs and interest of the farmers, cooperation is necessary in many forms. Rural agriculture is the field that the government concentrates the investment.
- In order to develop organization and management, to choose suitable models, to create favorable conditions for the establishment, operation and development of the cooperative according to the regulations and laws, and to cooperate closely between related sectors to guide and monitor the operation of cooperatives.
- Resources should be mobilized for the construction of cooperatives. The banks, Department of Investment and Development have the priority loaning plan.
- The state-owned enterprises will sign contract on supplying materials and services to the cooperatives.

(6) New Projects for Cooperatives

In order to solve the problem of capital for producing, to establish the close relationship between the producers and traders, the Food Import-Export and Agricultural Inputs Company has made a

new plan for the company and cooperatives. PC of Dong Thap Province has approved and gave permission for implementation. For an effective implementation, PC of Dong Thap has a guidance as follows:

- Based on the content of the plan between the Import-Export Company and cooperative and the actual situation of the locality, the cooperatives should be selected participating with the Import-Export Company. In 1998 it should be demonstrated in some convenient cooperatives. These should be analyzed, evaluated, modified and used to multiply in the following years.
- DARD, Commercial Tourism Department and the allied council of the cooperative in the province have the responsibilities to guide, investigate and help the cooperatives for signing and carrying out the contract. Commercial Tourism Department and the Import-Export Company have the responsibilities for examining the results of implementation of the plan and submitting to PC of the province. During the period of implementation, if there is any constraints or difficulties, a report will be made to PC and guiding staff of economic cooperated development to examine and to give guidance.

In each district, an agricultural cooperative as a model will be selected for making cooperation with enterprises. It should be strong enough and experience in doing business to make their business activities much easier and more comfortable. When this model develops and gets profit, it will be enlarged to other areas.

The company will cooperate with cooperatives directly to buy commodity rice from farmers according to the following ways;

- The company will order rice-processing factories under the management of the company to organize buying paddy at the cooperative area equally with market price or floor price. If the market price is lower than the floor price, the company will still buy at floor price to protect farmers from the loss. If the market price is higher than the floor price, farmers can choose the buyers who can buy their products at the highest price. The cooperative will get sum of commission per ton with the agreed percentage.
- Cooperative will borrow capital from the bank and to organize buying paddy from cooperative members. The company will send the staff to the buying points to check the quality of paddy and to guarantee for commodity's quality.
- Paddy is bought by the factories to process into rice. The company will count the expenditures based on the real conditions. The benefit will be back to the cooperative. Cooperative members who sell products to the cooperative will be listed to know the quality that they have sold. The above benefit will be divided, 10% for the cooperative and 90% for cooperative members.

It needs to have the support of capital from the bank to make the cooperative having enough money to buy products in time. The profit from one ton of paddy will be calculated as 61,400 VND.

The advantages of this way are;

- Encourage farmers to sell their products to cooperatives
- Encourage farmers to join cooperatives, strengthen the contribution for the development of cooperative economy
- Making farmers production stable
- The benefit of farmers is clear. So it contributes to stabilize and develop social economy in the rural area.
- Making a solid connection between cooperatives and company for supplying materials and for developing the capacity to get enough amount of export rice for the company.

Another cooperation's purpose is to find the way to supply fertilizer, pesticide, agricultural machines, etc. to the farmers with the proper price, and with service on time based on the farmer's demand of agricultural equipment. Company imports and buys agricultural equipment through the central agricultural equipment corporation to provide for the cooperative, with different quality depending on the requirement of each cooperative. Agriculture banks and commercial banks or other credit funds are prepared to allow cooperatives to loan capital for buying agricultural equipment from the company. The loaning period will be based on each crop. The interest will be paid according to the existing interest rate applied to the cooperative. The cooperative that receives agricultural equipment from the company will sell them to the cooperative members at the stable interest after the bank interest and expenditures are deducted. The company will provide all kinds of required agricultural equipment by the cooperatives which are suitable with local production.

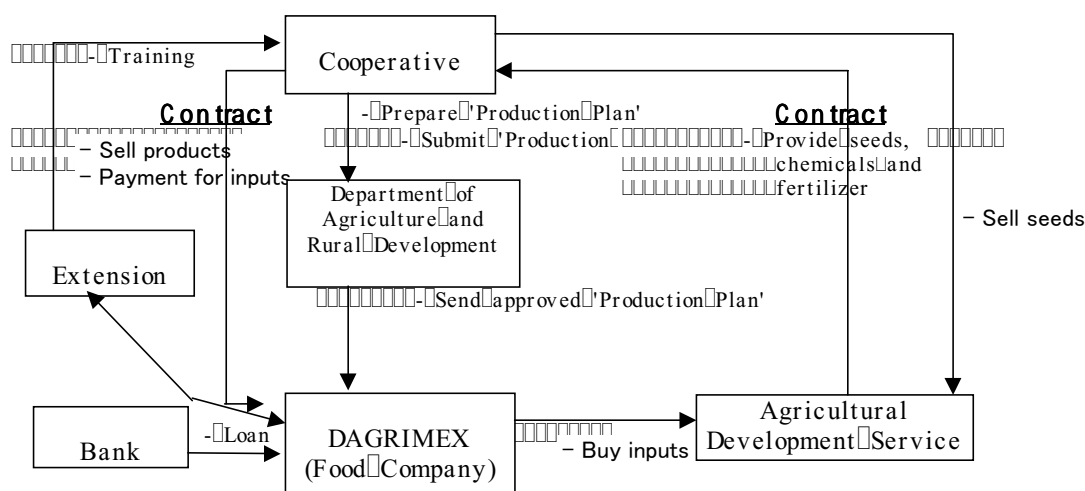
The benefits from this system to be considered are;

- The price of agricultural input materials will be cheaper and more stable in comparison with the market price.
- The cooperative members will rarely borrow money from outside with high interest to buy agricultural equipment.
- The cooperative is a stable place to buy agricultural equipment procured by the company
- Creating more convenient conditions for cooperatives to grow superior paddy for export and to meet the requirement of the market.
- Allowing the cooperatives to get the export quota when they are strong enough in capital, quality, experiences in buying rice, and conditions are ready to establish rice processing facilities in the region. The company can make joint venture with cooperatives to build rice mills in the region to serve for export.

PC of Dong Thap Province asked cooperation to DAGRIMEX with 3 cooperatives (Binh Trung in Than Binh District, An Phu and Phu To in Tan Nong District) to buy products and to provide inputs

(chemicals, fertilizer and seeds) through Agricultural Development Service Company. DAGRIMEX borrows loan from bank to provide Agricultural Development Service Company. With Import-Export Company (DOCIMEXCO) with 2 cooperatives, such as Thi Tian and Binh Thanh in Lap Vo District. With Agricultural Service with 1 cooperative (Binh Phi Cooperative in Thanh Binh District) to provide seeds and to buy seeds and sell others. Extension center will provide training of production technique to the cooperatives. Cooperatives should prepare the production plan to be approved by DARD. If approved, the plan will be sent to the Company that will provide the capital and order to the Agricultural Service Company to provide inputs to the cooperatives. Amount of inputs, rice production will be decided based on the plan. Payment of the purchasing of paddy is done just after the selling of products. The amount of loan for inputs is deducted from the payment.

Relationship between Cooperatives and Companies



Case of Binh Trung Cooperative

Participants	Present condition as of October 1999	Conditions provided by the company
- DAGRIMEX - Extension Center	- Not agreed yet on the conditions - Cooperative considers that high profit cannot be obtained from this cooperation	- Company buys one good variety (not mixed) at floor price. If the market price is higher, paddy can be sold to others. - Not forced to sell all rice to the company - Company supplies fertilizers and chemicals at lower price - Extension center will sell good quality seeds and buy seeds produced in 50ha in each season - Long-term loan from bank can be available - Company staff will transfer the production technique - Cooperative cannot sell good seeds to other than center

Case of An Phu Cooperative

Participants	Present conditions as of October 1999	Conditions provided by the company
- Extension Center	- Still under negotiation - Strong request of agreement by members because of low quality paddy - Need food company to buy the products regularly	- Extension center will provide good seeds for 15ha - Technique of seed production will be transferred - Products can be sold only among the members to multiply to other farmers

I.3 Basic Development Concept

I.3.1 Constraints and Potentials

The constraints and their countermeasures of setting up farmer's groups are summarized as follows;

Constraints and Countermeasures

Constraints	Countermeasures
- The failed experience of old cooperatives discourages some farmers to join new groups	- Government support and encouragement of establishing cooperatives by farmers themselves and becoming membership based on Cooperatives Law
- Lack of information of benefits and advantages to be gained from grouping	- Government support to provide appropriate information and motivation for grouping
- Existing private traders whom farmers heavily rely on	- Establishment of new relationship between cooperatives and state companies
- Lack of ambitious leaders with strong will and capacity of community development	- Efforts to find out and train good leaders through workshops and training courses
- Short-sighted planning of production activities by farmers	- Providing training to group members to increase their capacity for long-term planning of production

While there are constraints mentioned above, there are potentials for organizing farmer's groups and the possibilities based on the potentials.

Potentials and Possibilities

Potentials	Possibilities
1.Existing small groups have a long history and experience with informal but reliable ties among members	- Promote the existing groups to strengthen and expand into cooperatives with farmers initiative
2.Farmers have strong needs to set up cooperatives and are willing to join if any, according to the RRA and the socio-economic survey of farm households.	- Stimulate voluntary farmers through finding and using good leaders as well as propagating procedure for cooperative establishment
3.The government has policy to encourage to establish and strengthen new cooperatives	- Advice and support to farmers by the government staff for clear understanding of the information
4.Some pilot cases are started such as agreement between state company and cooperative	- Encourage this agreement to diffuse other groups
5.There are some successful cooperatives in and out of the Study Area	- Utilization of these groups for exchanging experience

I.3.2 Target and Strategy

Basic development concepts formulated for the Master Plan shows the process from respective activities to the achievement of final targets. The final targets are set as the improvement of farmers' living conditions and the increase of farmers' income. In order to achieve the targets, farmer's organizations is the key for development of rural infrastructure, marketing of the agricultural products, purchasing of

agricultural inputs, and use of agricultural facilities, etc. Each sector already decides the necessity of farmer's organization to implement planned activities.

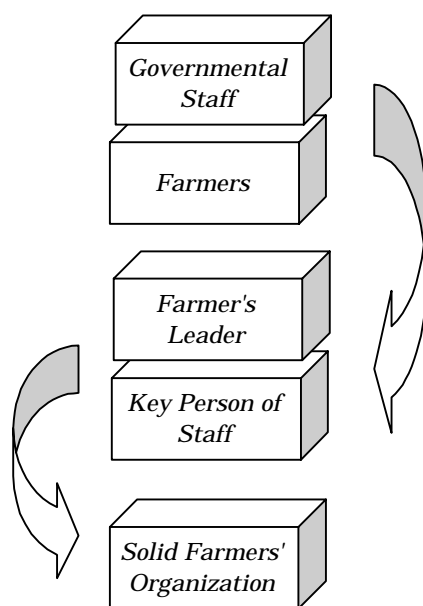
Based on the identification of the potentials and constraints, and also taking into consideration of the existing development plans, the proposed targets and strategies are prepared for farmer's organization. In setting targets and strategies, consideration on external conditions is essential.

Targets and Strategies of Farmer's Organization

Targets	Strategies	External Conditions
<ul style="list-style-type: none"> - Development of leadership of key persons among farmers and local officials - Detailed contents of depend on activities to be raised by other sectors 	<ul style="list-style-type: none"> - Training for farmers and government staff to be capable leaders - Training of understanding farmer's organization and its operation - Improvement/development of cooperation between governments and farmers for development 	<ul style="list-style-type: none"> - Existence of appropriate leaders and key persons - Farmer's active and voluntary participation in the organization with strong motivation

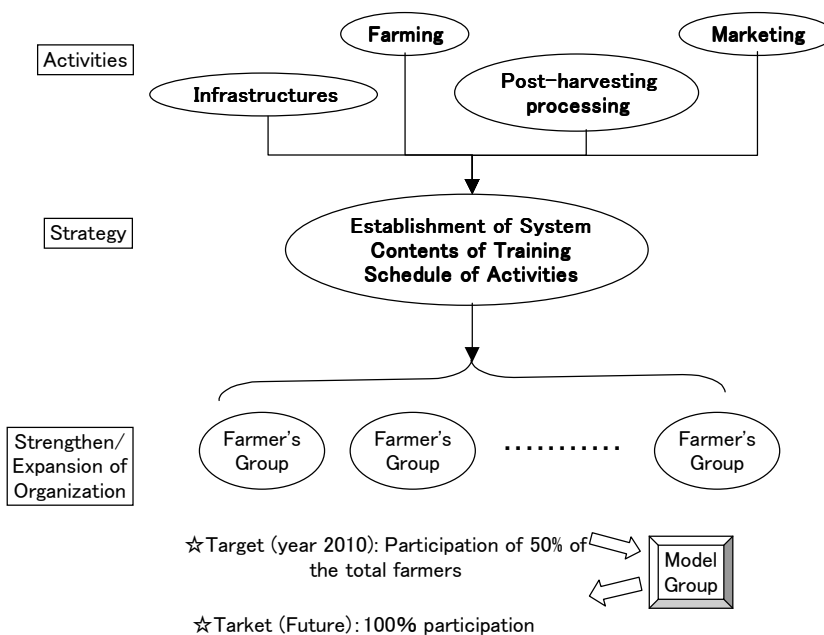
I.3.3 Development Objectives and Approach

Both of government and farmers need to understand clearly and agree to the advantages and role of the organization. Once the concept of the organization is fully understood by the relevant persons, establishment of groups can be started with finding good leaders. Leaders of the government staff in charge of farmer's organization and extension and leaders of farmer's groups should be developed in quality and quantity. When the both factors are prepared, the solid farmer's organizations can be realized.



Proposed Methodology

Based on the necessary activities by 4 sectors such as rural infrastructure, farming, post-harvest processing and marketing, strategy for strengthening of organization is prepared. Strategy includes how to establish the system for strengthening organization, detailed contents of training and implementation schedule of detailed activities. This approach will strengthen and expand farmer's organization with target of participation of 50% of the farmers in the region by the year 2010. These organizations can be modeled for multiplication to the rest 50% farmers for their participation in the groups in the distant future.



Flow of Strengthen of Farmer's Organization

I.4 Development Plan

I.4.1 Implementation Plan

At first, common understanding of the organization is necessary among the related parties. In order to set up the common objectives for the farmer's organizations, workshop/seminar will be held with governmental agencies in charge of organization and extension. The candidates for the governmental key persons will be selected and trained to be appropriate and skilled key persons. These key persons will be responsible for selecting farmer's leaders and providing training to the farmers. Also, they will play an important role of monitoring farmer's group's activities and providing consultation in the process of the strengthening the groups. The results of the evaluation of the activities will be fed back to the related agencies to improve and modify the strategy and approach.

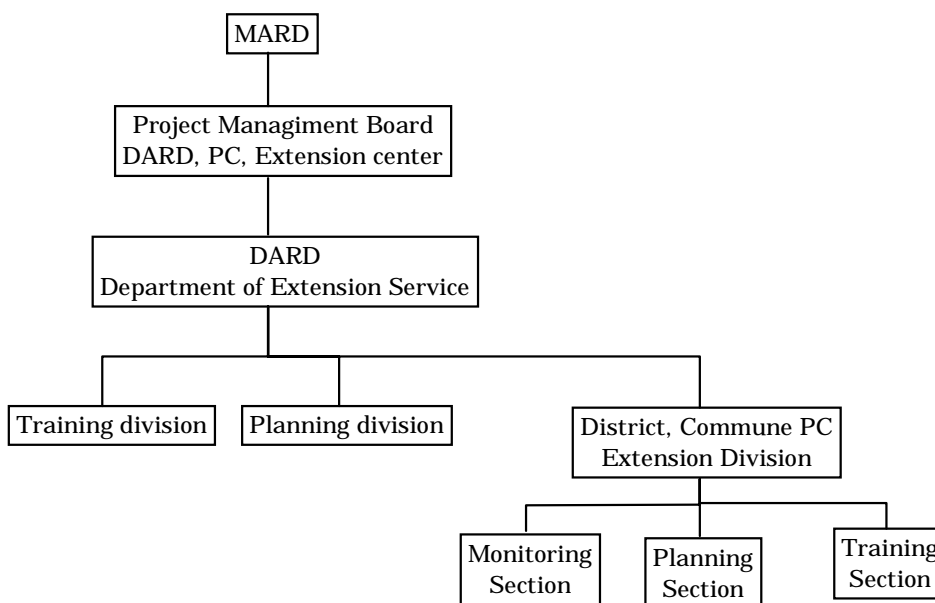
Activities for Establishment /Strengthening of Farmer's Groups

Item	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12
A. Stage of Preparation of Common Understanding																								
• Workshop / Seminar for Governmental Staff in charge (set up of common objectives)																								
B. Training of governmental key persons																								
• Selection of candidate of key person																								
• Training to make skilled key persons																								
C. Establishment/strengthening of groups																								
1. Role of key persons																								
• Preparation of draft plan of the project																								
• Participation to selection of farmer's leaders																								
• Provision of training to farmers' leaders																								
• Preparation of the draft project of organization																								
• Support for preration of the draft plan of joint activities																								
• Monitoring of activities of farmers' groups																								
• Evaluation and feed-back of activities of farmer's groups																								
• Consulting for the farmers' groups																								
2. Role of farmers																								
• Selection of leaders																								
• Selection of leading groups																								
• Basic education for leading groups																								
• Study tour																								
• Preparation of draft plan of joint activities																								
• Explanation of the project to farmers																								
• Registration of organization																								
• Selection of members of management board at general assembly																								
• Training of staff member of each section																								
• Preparation of the implementation plan of joint selling																								
D. Preparation of joint activities/extension of technique or post harvest processing																								

I.4.2 Implementation and O/M Organization

Project Management Board consisting of DARD, PC of Province and Extension Center is to be set up under the MARD. This board has a role of guidance and supervision of overall activities for strengthening and expansion of farmer's organization in the early stage. These activities include workshop/seminar for the local government staff to form common understanding of the organization, provide financial support to the local office and to provide technical assistance for planning and implementation of the activities, etc. under the supervision of the Board. DARD, especially Department

of Extension Service established 3 Divisions of Training, Planning and Extension. Extension Division with PCs of District and Communes has a responsibility of detailed activities of farmers' group from the beginning in order to check the level of achievement of the purpose and modify and develop the activities.



System of Implementation and Operation/Management

I.4.3 Estimated Cost

The costs for farmer's organization for the Master Plan and model project are estimated as follows. Items of 1, 2, 3 and training for governmental staff and farmer's leaders will be applied to the whole area. Other items will be implemented by each organization.

**THE STUDY ON INTEGRATED AGRICULTURAL DEVELOPMENT PLAN
IN THE DONG THAP MUOI AREA VIET NAM FINAL REPORT**

Cost for Organization for Master Plan

Item	Persons/time	Duration	Times/year	Unit price	Total/year
1. Workshop/Seminar (whole area)	100	2 days	1	\$300/day	\$600
2. Study Tour (whole area)	50	3 days	2	\$150/day	\$900
3. General Meeting (whole area)	100	1 day	2	\$150/day	\$300
4. Training					
- For governmental key person (whole area)	30	3 days	6	\$150/day	\$2,700
- Farmer's leaders (whole area)					
- Staff of each section	30	3 days	6	\$150/day	\$2,700
- Seminar for improvement of introduction of joint collecting and selling activities	30	3 days	6	\$150/day	\$2,700
- Basic education of quality control/evaluation method	30	3 days	6	\$150/day	\$2,700
- Drying/storage, post harvest processing technique	30	3 days	6	\$150/day	\$2,700
- Quality check/management technique	10	3 days	20	\$100/day	\$6,000
- Technique of operation and management of milling	10	3 days	30	\$100/day	\$9,000
- Technique of polishing and processing	10	3 days	5	\$100/day	\$1,500
	10	10 days	5	\$100/day	\$5,000
5. Monitoring					\$5,000
Total					\$41,800

Cost for 4 Model Organizations

Item	Persons/time	Duration	Times/year	Unit price	Total/year
1. Workshop/Seminar (4 zones)	50	2 days	1	\$150/day	\$300
2. Study Tour (4 zones)	25	3 days	2	\$75/day	\$450
3. General Meeting (4 zones)	50	1 day	2	\$75/day	\$150
4. Training					\$21,800
- For governmental key person (4 zones)	20	3 days	6	\$75/day	\$1,350
- Farmer's leaders (4 zones)	20	3 days	6	\$75/day	\$1,350
- Staff of each section	20	3 days	6	\$75/day	\$1,350
- Seminar for improvement of introduction of joint collecting and selling activities	20	3 days	6	\$75/day	\$1,350
- Basic education of quality control/evaluation method	20	3 days	6	\$75/day	\$1,350
- Drying/storage, post harvest processing technique	8	3 days	20	\$70/day	\$4,200
- Quality check/management technique	8	3 days	30	\$70/day	\$6,300
- Technique of operation and management of milling	8	3 days	5	\$70/day	\$1,050
- Technique of polishing and processing	8	10 days	5	\$70/day	\$3,500
5. Monitoring					\$5,000
Total					\$27,700

I.5 Analysis of RRA

I.5.1 Objectives of RRA

In order to understand the general situation of the Study Area, both on natural and socio-economic aspects, RRA was carried out from 19 April to 24 April 1999. Five communes in the Study Area were selected, using 5 criteria. Table below shows the selected communes based on the criteria. Fig. 1 shows the location of these communes.

Selected 5 Communes for RRA

Commune	Dong Thap Province				Tien Giang Province
	Tan Hong District	Tam Nong District	Thap Muoi District	Cao Lanh District	Cai Lay District
	Tan Cong Chi	Phu Thanh A	Phuong Thinh	My Quy	My Thanh Nam
Inundation Level	deep	deep	deep	deep	shallow
Soil Type	sandy loam	slightly acid	acid	slightly acid clay	cambisols
Economic Level	poor	poor	little high	poorer	little high
Development Level of Rural Infrastructure	Far from the district center, some parts of roads paved, low rate of access to electricity	Mainly water transportation, low level of water supply	Road network, electricity	Remote area, small road, mainly water transportation, no electricity	Road network,, electricity, drilled wells, some telephones
Cropping Pattern	2 rice crops	3 rice crops	3 rice crops, fruits, fishpond	3 rice crops, some livestock	VAC system

I.5.2 Survey Method

RRA was implemented with participation of all study team members and counterparts. Survey of each commune took two days each. RRA consisted of several kinds of participatory activities, namely, key informant interview, focus group discussion, individual informant interview with drawing crop calendar, commune map and organization structure.

I.5.3 General Information of the Surveyed Communes

The following table shows the outline of the 5 selected communes.

Basic Information

	Tan Con Chi	Phu Thanh A	Phuong Thing	My Quy	My Thanh Nam
Population	5,652	12,604	8,086	11,232	12,547
No. of Household	1,561	2,714	1,647	3,055	2,504
No. of Farm Household (Share of total households)	1,068 (68.4%)	1,952 (93.3%)	1,432 (86.9%)	2,861 (93.6%)	1,953 (78.4%)
Total Land Area	5,016 ha	2,052.3 ha	-	5,952 ha	1,992 ha
Farm Land Area	4,350 ha	1,750.3 ha	3,990 ha	4,096 ha	1,773 ha
No. of Hamlets	4	3	6	7	8

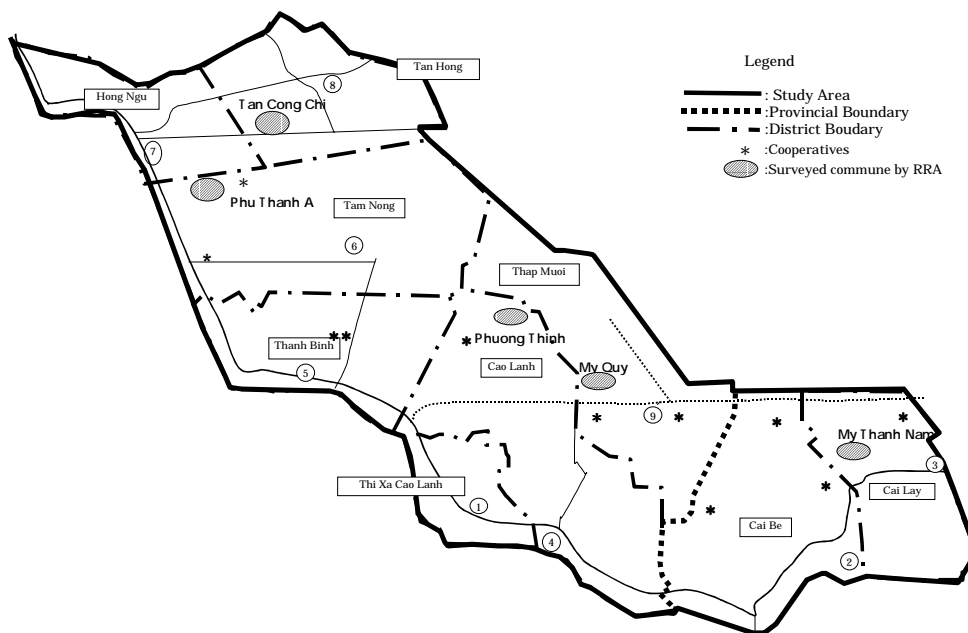
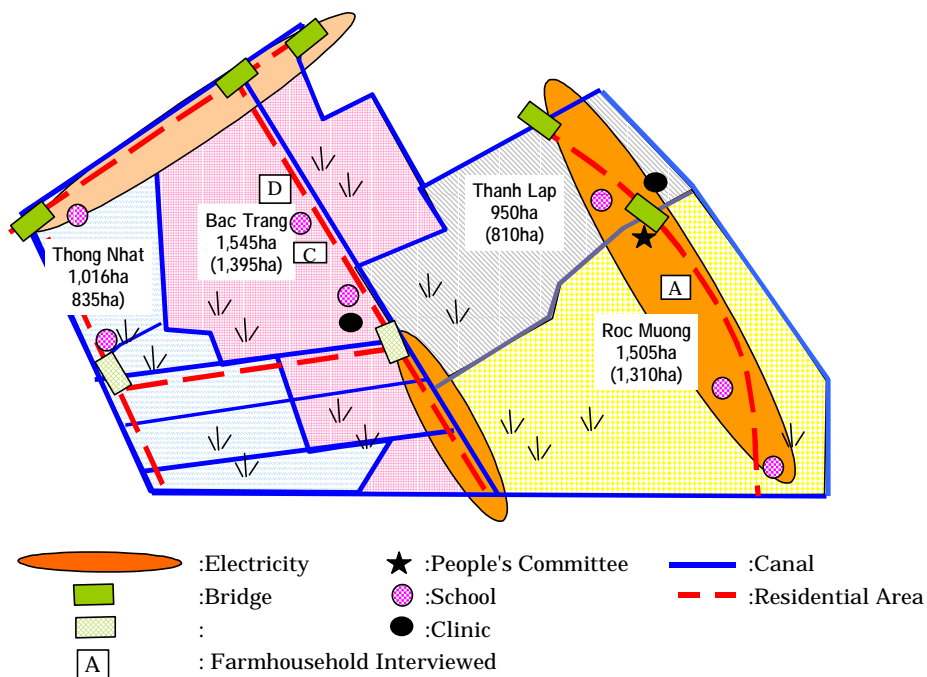


Figure 1 Location of Cooperatives and RRA Communes

(1) Tan Cong Chi

Tan Cong Chi Village



Socio-Economic Data of Tan Con Chi Commune

Item	Unit	
Total No. of Households	households	1,561
Total Land Area	ha	5,016
No. of Hamlet	hamlets	4
No. of Farm Households	households	1,068
Share of Farmers in Total Population	%	76.45
Landless Farm Households	households	269
Share of Landless Farm Households in Total Farm Households	%	25.2
Poor Households	households	478
Share of Poor Households in Total Households	%	30.6
Hunger Households	households	49
Main Products		Rice, Fish
Average Farmland Area	ha/house	2.78
No. of School		2
Primary School	schools	2
Secondary School	schools	0
No. of Health Station		1
No. of Market	markets	0
No. of Cooperative/ Collective/Farmer's Group		0 / 26 / 19
No. of Member of Coop./ Collective/Farmer's Group	persons	0 / 1,040 / 520
No. of Women's Union		15
No. of Member of Women's Union	persons	333

1) Commune Background

Tan Cong Chi Commune is one of 9 communes in Tan Hong District, Dong Thap Province. In wartime, Tan Cong Chi commune was located in the remote area near the national boundary and used as a revolutionary base because of its complex topography and locality. Most of the population is immigrants from other provinces and returnees from Cambodia. The commune was established in the beginning of July 1989 composing of 4 hamlets. Though nobody lived in Thong Nhat hamlet and Bac Trang hamlet at the time of commune foundation, after roads were constructed, people moved to live along the roads. Additionally, government has encouraged immigration to this area since 1993 through economic development (model) project and population has increased. Now Thong Nhat hamlet has the largest population among 4 hamlets.

Natural population growth is not high, and social growth by migration from neighboring provinces is high especially in Bac Trang hamlet, which has the largest land area among 4 hamlets. Total population is 5,652 with 1,561 households in 1998. There are 478 poor households (30.6% of total households), of which 52 poor and invalid households are supported by the government program "Hunger Eradication and Poverty Alleviation". 940 households migrated from other communes and provinces to live temporarily for the agricultural production. Total land area is 5,016 ha. All of the land users in the commune have land use certificates.

Land Use in Tan Cong Chi

Land Use	Area (ha)
Agricultural Land	4,350
Mixed Garden	47
Residential Area	101,985.7
Others	261,437.5
Total	5,016

2) Road Condition

It takes 3 hours by car from the provincial capital, Cao Lanh Town to Tan Cong Chi. The national road from Cao Lanh Town to Hong Ngu (Center of Hong Ngu District) is paved, and from Hong Ngu to Tan Cong Chi is not paved and very bumpy. Total length of roads in the commune is 35.5km, including national road No. 30 of 6.5km rocky road, provincial road No. 843 of 7km earthen road, and commune road of 22km bumping road. The surface of the roads is damaged easily by flood and cannot be repaired properly because of lack of fund. In dry season, villagers can travel easily by land but the roads are very dusty. In rainy season, since the road becomes muddy and cannot be used by vehicles, people transport mostly by water. Many villagers in the commune cannot buy enough boats to overcome this transportation condition.

3) Water Resources

There are 70 drilled-wells developed by UNICEF and some private organizations, which can be accessed by 51.88% of the total population and water quality is good. The rest population use surface water of canal and ponds. Since there are many canals around the commune, it is very easy to transport and irrigate for agricultural purpose. Commune builds dike system which protects harvesting of Summer-Autumn crop from flood. However, as flood often destroys dike and roads, the commune needs capital to reconstruct them. Flood occurs during mid-June and September. The commune encourages farmers to invest in pump. There are 5 electric pumping stations and 12 diesel engine pumping stations which cover the whole agricultural area in the commune. Fee of using the pumps are collected from all farmers after harvest. Also, some farmers have small pumps individually.

4) Public Services

Every hamlets have primary schools and total number is 7 consisting of 25 classes. Among them, stable classes are 14 and others are temporary classes. Total number of pupils and teachers are 1,129 and 41 respectively. There is no secondary school. Education facilities have been constructed since 1989 and still quantity and quality are not appropriate. Road condition in rainy season makes the children difficult go to school. There are 2 health stations with 2 physicians and 2 nurses. Major diseases in this area are diarrhea, respiratory disease and water borne disease. Along the roads, there are many simple houses made of cheap materials. They are made of bamboo, woods, thatched roof and earth floor, which are mostly illegal residents came from other areas. Electricity line is

connected to 47 households, which accounts only 3.93% of the total households. Thong Nhat hamlet has no electricity supply. The houses without electricity use batteries and oil lamps. Most of the houses get information including agricultural information through TV and radio and daily conversation with neighbors. Immediate information of agriculture can be obtained from leaders of hamlets.

5) Economic Activities

Agriculture is the main industry in the commune. Total area of agricultural land is 4,350ha (86.7% of total commune area), which is mostly rice field. Rice is cropped twice a year (S-A and W-S paddy crops). Secondary crops are beans with area of 100ha.

Employment in agriculture shares 76.5% of the total labor force and the rest 23.5% is engaged in service sector such as material supply to farmers and general shop. There are 498 landless households which include non-farm households, accounting 41.67% in the total households. The number of landless farm households is 269 (25.2% in total farm households). They are hired as wage labors by other farmers of the commune during the busy farming season. Wage is 3,000 VND for 8 hours for men and 1,500 VND for 8 hours for women. Sometimes they go fishing but only a small percentage of them go out of the commune to find jobs in flood time. The types of field activities that need labor force are land preparation and sowing. Women are doing light jobs such as transplanting and weeding.

At least one miller exists in each hamlet. When necessary, these private millers are brought to each house. Milling charge is 1,500 VND/20kg. The average annual income is 1,154kg paddy/person (1.7 million VND). There are fishponds with total area of 20ha. Livestock are 700 pigs, 4,800 chickens, 7,000 ducks and 120 cows in total but each household practices small-scale raising or self-consumption. In the harvest time, every day private traders, mainly from Tien Giang province come to the commune to get rice from farmers directly or farmers bring rice to the places where private traders come and the traders bring them to millers. After milling is finished, rice price is given to the farmers.

Total paddy production is 6 ton/ha in good soil and 3 ton/ha in bad soil. 4-4.5 ton/ha for summer-autumn crop, which needs many facilities rented and spend a lot. Soil acidity of some of the farmland is high. Acid soil land causes low yield. Higher level land can get higher income because of no flood damages even if they have a small area of land. However, it is not certain to get irrigation water. Therefore, higher level land spends more money for irrigation (pumping cost is higher). For acid soil, instruction from extension workers of the district is not welcomed by the farmers and instruction to improve soil is based on other areas' experience. Technique is applied based on their experience (e.g. different effects often occur when farmers follow extension

workers' instruction). Some farmers have several agricultural machines, namely, thresher, tractor with plowing, pump by diesel, which are also served to the other farmers with fee. Pumping charge is different, for example, from 25kg paddy/1,000 m² to 51kg paddy/1,000 m² per 1 crop season. Rental of other machines is about 35kg paddy/1,000 m².

6) Commune Organization

Under the PC of Commune, there are many organizations. There are 26 production collectives with 1,040 members, which have been established since 1989 and are governed by PC of Commune. They provide services such as irrigation and drainage, preparing land and threshing with renting machines, chemical supply and buying paddy. Members pay membership fees, 10kg paddy/ha/crop season. Besides, there are 19 farmers' groups with 520 members. Their role is mainly management of irrigation water. Extension workers from district provide agricultural information.

7) Problems of the Commune

Regarding the problems of the commune, there are following problems according to the key informant interview and focus group discussion. Also, wants analysis can show the level of importance of these problems.

(a) Agricultural Activities:

i. Capital

If they produce many kinds of crops in a little land, they need more funds. Fund for production is limited and farmers should borrow money with high interest rate of 8-10% per month. Farmers need low interest rate loan from bank. Also, the maximum amount borrowed from banks is lower than the farmers' need. Government plans to promote further this area but just land is allocated to the people who moved into this area. Therefore, government and other organizations should increase fund to farmers with favorable repayment conditions.

ii. Means of Production

Agricultural machines such as thresher, dryer, plow, water pump, etc. are necessary to increase productivity. The rental of machines from the private owners varies and the farmers should wait for their order in the busy time.

iii. Price of Products

Price of paddy is lower compared with input and farmers cannot make enough profits. Farmers usually do business with private traders. Therefore, government should set proper prices of paddy and inputs. If rainy season comes early, rice production cannot get high yield and price is low.

iv. Agricultural Inputs

Farmers need fertilizer, pesticide and seeds. Especially, new varieties of seeds are required. The way to increase income is an introduction of new varieties of rice (seeds) that can be grown in acid soil and deep flooded area. Old seeds cannot have high yield because of intolerable for brown

hoppers and diseases. Produced paddy is used as seeds for the next season if no damages by rain. But if the quality is bad, new seeds are bought from outside. Price of seeds is 2,000 VND/kg if bought from farmers and 2,500-3,000 VND/kg from Seed Company. Family labor is not enough and need hired labor, which increase production cost.

v. Marketing

It is difficult to get stable marketing of the products. Therefore, farmers request that the government should help to find market.

(b) Rural Infrastructure:

i. Schools

Children who want to get higher education have to go to school in other commune/district. Therefore, school is necessary in the commune.

ii. Electricity

Farmers need electricity for production (especially pumping irrigation water) and for daily living.

iii. Drinking Water

Drinking water supply is necessary because acid soil makes water inappropriate for drinking if it rains. Canal water is also polluted by chemicals and sometimes causes diseases.

iv. Health Facilities

Health station in the center of the district is far from the commune. Additionally, health station in the commune has not enough doctors and nurses.

v. Road/Canal System

For easy transportation, road/canal systems should be developed. Road level should be higher so as not to be destroyed by the flood. Additionally, since some farmers have no access by land from the house to the field, canal is important as water transportation. Boats and bicycles are necessary as transport. Improvement of road system is necessary in the commune so that children can go to school.

vi. Dike

Every year farmers fund is mobilized to build dikes, but is damaged by flood, then spend a lot again to build dikes. 15,000VND/1,000m² should be paid to production collectives. Also, as houses are easily damaged by heavy rain and flood, villagers should construct or repair their houses every time. Embankment for stable summer-autumn crop and flood prevention is necessary. Assistance from government is required to mobilize farmers to repair existing dikes and raise elevation of dikes to prevent flood, which can increase crop season, production and income.

Wants Analysis of Tan Cong Chi

Item	Number	Remarks
Capital	12	For production (7), with low interest rate (2), Loan from bank (2)
Means of Production	12	Machine for production (1), Thresher (1), Dryer (1), Plowing (6), Water pump (1), Processing (1)
School	12	Well (3), Clean water (6)
Drinking Water	10	Well (3), Clean water (6)
Electricity	10	For production (2), For living (2)
Health	9	Health station (3), Doctor&nurse (2), Hospital (2)
Road	7	For easily transportation (1), High level road (1)
Price of Products	4	Government should set proper rice price (2), Good input price equivalent of good rice price (2), Increase rice price (1)
Fertilizer	4	
Market	4	Government should help to find market.
Dyke	3	Embankment for stable summer crop (1), Prevent flood (2)
Canal	2	For water transportation
Telecommunication	2	TV, Radio, For agricultural information (1)
Transportation	2	Boat (1), Bicycle (1)
Seeds	1	
Pesticide	1	
Bridge	1	

(2) **Phu Thanh A**

Basic Data by Hamlet of Phu Thanh A Commune

Hamlet	Total Area (ha)	Farmland (ha)	Households	Population
Long Thanh	862.0	727.1	925	4,422
Long Phua	509.2	460.0	874	3,975
Long An A	681.1	563.2	915	4,207
Total in the Commune	2,052.3	1,750.3	2,714	12,604

Socio-economic data for Phu Thanh A

Item	Unit	
Total No. of Households	households	2,093
Total Land Area	ha	2,052
No. of Hamlet	hamlets	3
No. of Farm Households	households	1,952
Share of Farmers in Total Population	%	33
Landless Farm Households	households	515
Share of Landless Farm HHs in Total Farm HHs	%	26.4
Poor Households	households	557
Share of Poor Households in Total Households	%	26.6
Hunger Households	households	61
Main Products		Rice
Average Farmland Area	ha/house	1.05
Average Income of Farm Household	VND/month	920,993
No. of School	schools	6
Primary School	schools	
Secondary School	schools	
No. of Health Station		1
No. of Market		1
No. of Cooperative/ Collective/Farmer's Group		0 /16/ 10
No. of Member of Coop./ Collective/Farmer's Group	persons	0 /- / 1,652
No. of Women's Union		53
No. of Member of Women's Group	persons	-

1) Commune Background

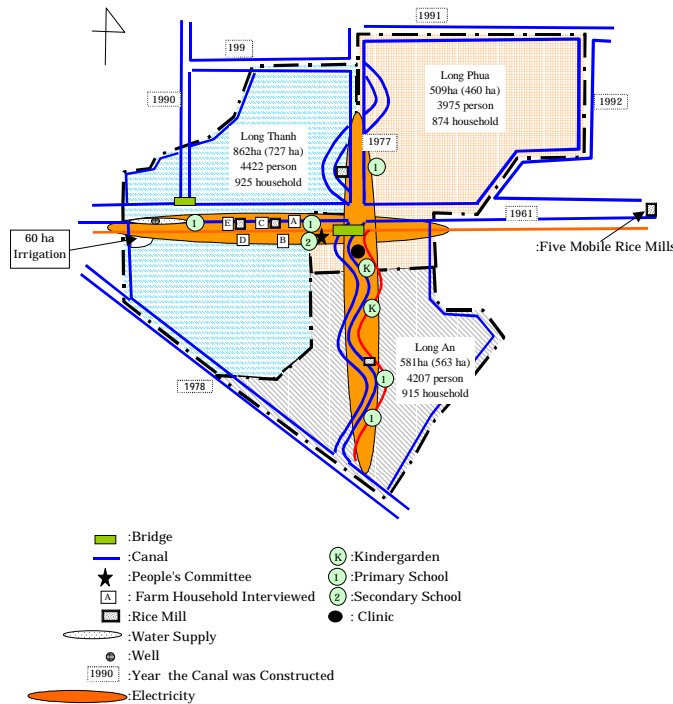
Phu Thanh A is one of 12 communes in Tam Nong District. Phu Thanh A was originally established in 1964. The administrative border of the commune was changed 3 times, in 1975, 1983 and 1994. These changes were carried out with canal construction since 1961. The commune consists of 3 hamlets which were divided in 1975.

Land Use in Phu Thanh A Commune

Landuse	Area (ha)
Agricultural Land	1,750.3
Road, Water Canal Bank, etc.	117.2
Residential Area	109.6
Others	75.2
Total Area	2,052.3

There are 12,604 inhabitants, which is the largest among 12 communes, with 2,714 households.

Poor farm households are 557 (26.4% of the total farm households), and households in starvation are 61.



2) Road Condition

Dong Tien canal was constructed in 1961 and it proceeded the development of this area. Along this canal, provincial road from Long An to Tram Chim was constructed through the center of the area. The number of the inhabitants has increased along the canals and roads. Regular bus operation is stopped because of the damages by

flood in 1996.

3) Water Resources

Canals have continued to be developed and constructed. The length reaches 40.05km, covering 1,696 ha. Compared with northern districts, this area is far developed. From the site observation, it is clear that population density is high and farmland per household is small. Some parts of the area (only 10 households) receive water supply. Dike is constructed along canals and the maintenance/repair costs of these dikes are heavy burden to the farmers. The area adjacent to this dike is a little higher level and soy beans are cultivated. Flood starts mid-July and finishes in November.

4) Public Services

Phu Thanh A is a transit point of transportation by boat from An Giang Province. There are 2 services every day.

5) Economic Activities

Agriculture is the main industry of the commune and 3 paddy cropping is practiced in 1,750ha farmland (85.3% of the total land area). Total number of farm household is 1,952, accounting 93.3% of the total households in the commune. The number of landless farm household is 515 (26.4% of the total farm households). 93.6% of the farmers with land own land use certificates.

Average land area per household is about 1.05 ha. Actually the expansion of the farmland is limited. Regarding the transfer of land use right, there is a case that small scale farmer transfer the right for the economic profit and change to be commercial activities. Table shows the production condition in 1998. In the higher-level land, irrigation water is not enough in dry season and water level of canals decreases seriously. In the high land along the bank, there are many damages by rats and the preventive measures are required.

Rice Production in Phu Thanh A

	Total of 2 Crops	Winter-Spring	Summer-Autumn
Total Area of Seeding	3,392 ha	1,696 ha	1,696 ha
Average Yield	4.5 ton/ha	5.7 ton/ha	3.4 ton/ha
Total Production	15,430 ton	9,664 ton	5,766 ton

Traders come to the commune by boats and farmers sell them paddy directly. There are 4 milling facilities along canals and 5 mobile mills, all of them are privately operated. The average income of farm household per month is 920,993 VND, which is lower among all communes of the district.

6) Commune Organization

There are 16 production collectives. There are also Farmer's Union, Women's Union, Youth Union, etc. same as the other communes. Role of Women' Union is implementation of governmental policy, PC's policy and family planning. Female headed household accounts about 2% of the total households in the commune.

7) Problems of the Commune

(a) Agricultural Activities:

i. Capital

28.5% of the total farm households is poor class and they need some financial support. Many farmers have a problem of fund for agricultural production, breeding and trading. It is possible to borrow money from Agricultural Bank but the maximum amount is limited at 4 million VND/ha. Therefore, farmers cannot invest new activities easily.

ii. Means of Production

Agricultural machines such as land preparation equipment, plows, threshers and pumps are not enough. At present, these activities rely on private to machine owners. The JICA Study Team asked

the possibility of joint use of agricultural machines and facilities to save the individual cost. The commune answered that common utilization is possible if financial aspect is clear and they are willing to consider.

iii. Prices of Agricultural Inputs and Products

The prices of pesticide, fertilizer and seeds of new varieties are higher. Instead, fluctuation of the paddy price is the problem. The JICA Study Team asked that the commune has ever considered the possibility of development of milling factories and selling polished rice instead of paddy selling. The commune replied that they are interested in the idea but raised financial limitation.

iv. Extension Services

Extension services of agricultural technique are not enough. Especially, supply of seeds is not enough. Staff of the district explained that adequate extension services need more budget. Regarding the production of seeds, seed development programs of 13 target crops have progressed. Extension Office (5 staff members) works in cooperation with Plant Protection Office and Veterinary Office in the District. Basically 2 rice crops are carried out in this commune. In high land area 3 crops are practiced (2 rice crops and supplementary crop) and soybeans are cultivated. Yield of soy beans is 3.5ton/ha and sold at 3,500-6,000 VND/kg, which is high profit.

(b) Infrastructure:

i. Dike

Dike system should be developed for 3 crops, flood protection and plant protection.

ii. Road

Road system, which can be used even in rainy season, should be developed. It will benefit for children to go to school and for farmers to go to field and markets.

iii. Canal

Canals should be dredged and excavated in order to get enough water for irrigation and transportation in dry season.

Wants Analysis (Phu Thanh A)

Item	Number	Remarks
Capital	8	for agricultural production (1), breeding (1), trading (1)
Agricultural Machine	7	Dryer (1), Ploughing (3), Threshing (1)
Dyke	6	for 3 crops (3), flood protection and plant protection (2)
Agricultural Inputs	6	Pesticide (1), Seeds of new varieties (2)/anti-insects(3)
Road	5	Easy access to schools, good road available even in rainy season.
Price of Agricultural Inputs	5	Price should be low (3) and stable (1)
Agricultural Extension	4	New paddy varieties with high yield, insect tollerent
Price of Products	4	Rice price should be high and stable (4)
Canal	3	Dredging and excavating for enough water in dry season
Market	2	Need market
Information	2	Agricultural information (1)
Water	1	for irrigation (1)
School	1	
Electricity	1	
Health	1	Need clinic

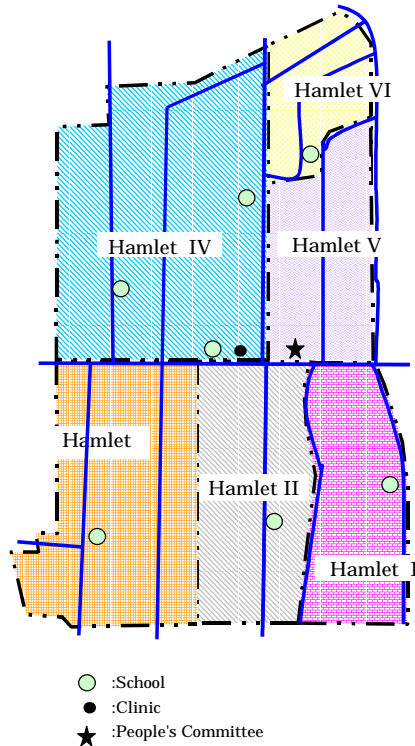
(3) Phuong Think

Socio-economic Data for Phung Think Commune

Item	Unit	
Total No. of Households	households	1,647
Total Land Area	ha	4,425.90
No. of Hamlet	hamlets	6
No. of Farm Households	households	1,432
Share of Farm Households in Total Households	%	86.9
Share of Famers in Total Population	%	85
Landless Farm Households	households	171
Share of Landless Farm Households in Total F/Hs	%	11.9
Poor Households	households	445
Share of Poor Househods in Total Households	%	27.0
Hunger Households	households	62
Main Products		Paddy
Average Farmland Area	ha/house	2.64
Average Income of Farm Household	VND/month	1,100,000
No. of School	schools	7
Primary School	schools	6
Secondary School	schools	1
No. of Health Station		1
No. of Market		1
No. of Cooperative/ Collective/Farmer's Group		0 / 0 / 14

1) Commune Background

Before establishment of Phuong Thinh Commune, there already existed 6 production groups for a long time. In 1990, these production groups were designated as 6 hamlets which make Phuong Thinh Commune. Phuong Thinh Commune is one of 18 communes in Cao Lanh District. There are 8,086 people with 1,647 households. All inhabitants are Kinh ethnicity. Natural growth rate is not



high because of successful family planning. However, there are many immigrants from other area except Hamlet 1. Temporary migrants who own land in the commune come from outside only for production activities. There are many poor (445 households, 27% of total households) and landless farm households (171 households) compared with other communes in the district. 348 households are supported by the “Hunger Eradication and Poverty Alleviation Program”, in which 19 households are in hunger, 329 households are poor. Definition of the poor and the hunger is; (a) Poor : less than 25kg/person/month of white rice consumption, (b) Hunger : less than 13kg/person/month of white rice consumption. 86.9% of the total households in the commune are engaged in agriculture. In 1998, the Land Office has issued 1,842 Certificate of Land Use (CLU), reaching

the rate of 71.03% of the total households with land.

2) Road Condition

Generally, boats are used to access to the farm filed and to transport the products. The fields along roads can be accessed by motorbike, bicycle and on foot. Besides dredging up the canals, the masses have been mobilized to build rural roads. There are 2 main roads passing through the commune with total length of 15,746m that are usable by only motorbike and bicycle in dry season. In rainy season, roads cannot be available and boat is the only transportation measure and all households have boats. Flood occurs in September and October. In 1998, in order to reduce flood damages, PC of the commune supported to construct 2 embankments protecting summer-autumn rice crop in hamlets 1, 2 and 4 with financial assistance of 50% of the total cost.

3) Public Services

There is one clinic with 3 physicians and 2 nurses. Mostly, inhabitants suffer from water born diseases. 7,500m electric line is developed to serve the daily life in hamlets 2, 4 and 5. 140 households (8.5% of the total) have electricity and the rest use oil lamp and battery. Fuel for

cooking is firewood. Villagers cut trees such as Melaleuca and eucalyptus in their home garden, around houses and anywhere inside the commune. Sometimes they buy firewood from traders coming from outside. For communication, 40% of the total households have TV and radio and most of information is received through these media. There are 6 primary schools and almost 100% of children who should go to school are now in school. Each hamlet has at least 1 school excepting Hamlet V. Secondary school is located in the next commune, 3km from this commune. Students use bicycle in dry season and boat in rainy season. The higher education is available in Cao Lanh Town. 95 people are targeted as eradication plan of illiteracy in 1998.

4) Economic Activities

The number of farm households is 1,432, which accounts 86.9% of the total households. 85% of the total labor is engaged in farming. They produce only rice in total cultivated area of 3,990ha in the commune. The average farmland area per household is 2.6ha which is the 2nd largest in 18 communes of the district. Mainly 2 paddy cropping system (W-S and S-A cropping) is practiced and 3 cropping system can be found in some areas. Yield is usually 6.5ton paddy/ha of winter-spring crop but acid soil produces only 2.5 ton/ha. Livestock is still in small scale and pigs, chickens and ducks are raised for self-consumption. Fishpond is also small and used for family consumption.

In selling paddy, private collectors come to farmers' houses in the harvest time. There are agricultural machines owned privately, 354 pumps, 250 boats, 102 threshers, 116 hand plowing machines and 3 fishing boats in total in this commune. Rental of machines, e.g. a plowing machine is 400,000 VND/ha and thresher is 200,000 VND/ha. Land tax of winter-spring crop is 180kg paddy – 280kg paddy/ha/year, being converted to money at the current rice price. The grade of most of the land in the commune is 4 or 5 level. If the land has acidity, land tax is exempted for 3 years. During the deep-flooded time for 3 months (mid-August –beginning of November), some farmers go fishing or find hired jobs such as raising ground level, constructing banks and other kinds of jobs. The wage labors also move to the area with 3rd crop and work for the other farmers. Rich farmers have dryers and use firewood of 1.5 ton/day for this machine. However, dryers are used only the time before the flood (in June, July and August), and left unused during the rest of the year. Average per capita income of farmers is 1.1 million VND/month, which is the 2nd highest amount in the district.

5) Commune Organizations

There are 17 women saving groups with 249 members. Members should contribute 10,000 VND/month for saving. Women's groups can provide loan for use for production activities. In agricultural activities, women do rather light works such as re-transplanting, weeding and drying. Women have no opportunities to attend training because of their low education level and young

men are likely to join training of agricultural technique. There are no agricultural cooperatives and collectives but 14 farmers' groups with 350 members. Commune wants to increase agricultural production. Therefore, farmers are encouraged to establish and join production cooperatives. According to PC of the commune, the advantages to set up cooperatives are; (a) many farmers can do the same agricultural activities at the same time and help each other, (b) expenditure can be reduced such as rental of machines from individual owners, (c) services and information can be obtained easily, especially poor farmers can be helped, and (d) good planning can be made to avoid inappropriate activities.

6) Problems of the Commune

Regarding the agricultural activities, the following problems are raised by the participants in key informant interview and focus group discussion.

(a) Agricultural Activities:

i. Capital for Production

In order to develop livestock, increase production and prevent flood, farmers need capital which can be borrowed from the bank with good terms. Since the expenditure for production is high (for example, 2/3 of the total expenditure is for production), farmers should borrow money which makes their economic situation worse.

ii. Market

It is difficult to find market to sell their products at favorable condition. Market in the commune should be stable and upgraded to be large and convenient for the villagers.

iii. Prices of Paddy and Inputs

Price of paddy fluctuates. Compared with price of rice, input price is higher and profit cannot be made easily. Therefore, price of rice should be stable and higher and price of fertilizer and pesticide should be lower. Farmers consider the balance of price of inputs and paddy is the most important to increase their income. However, they have not find any solution yet.

iv. Agricultural Machine

Especially for plowing and harvesting of paddy they need modern machines.

v. Acid soil has low yield of the products.

vi. In order to increase agricultural production of rice, production cooperative is one of the good ways for farmers.

(b) Rural Infrastructure:

i. School

High school is necessary and the existing schools should be repaired.

ii. Drinking Water

Villagers need clean water for drinking and cooking.

iii. Road

Roads in the commune should be paved and developed for production and daily life. Whole commune should be connected by road network which can be available by motorbike even in rainy season.

iv. Electricity

All houses should be connected with electricity line for lighting. Installment and electric charges should be low enough for the most of households to manage.

Wants Analysis of Phung Thinh Commune

Item	Number	Remarks
School	12	High school (1), Repair (1)
Drinking Water	11	Clean water (8)
Road	10	Paved (2), Whole village network (2), Improve (2)
Capital, Loan	9	For breeding (4), For producing (4), For flood prevention (1)
Electricity	7	Lighting (2), Low price (1)
Market	6	Stable (1), Upgrade (2), Large and new (2)
Price of Rice	6	High and stable price
Price of Inputs	5	Low price of fertilizer/pesticide (2), Stable (1),
Agricultural Machine	4	Plowing (2), Producing (2)
Bridge	4	
Rice Field/Land	3	Need government help (2)
Entertainment	3	
Need Jobs	2	For young men
Capital for House	2	To protect from flood
Health	2	Health station (2), Hospital (1)
Public Toilet	1	
Embankment	1	
Price of Livestock	1	Good price of pig
Boats	1	For transportation in flood season
Cattle	1	
Means of transportation	1	
Training	1	For agricultural technique, producing and breeding

(4) My Quy

Socio-economic Data for My Quy

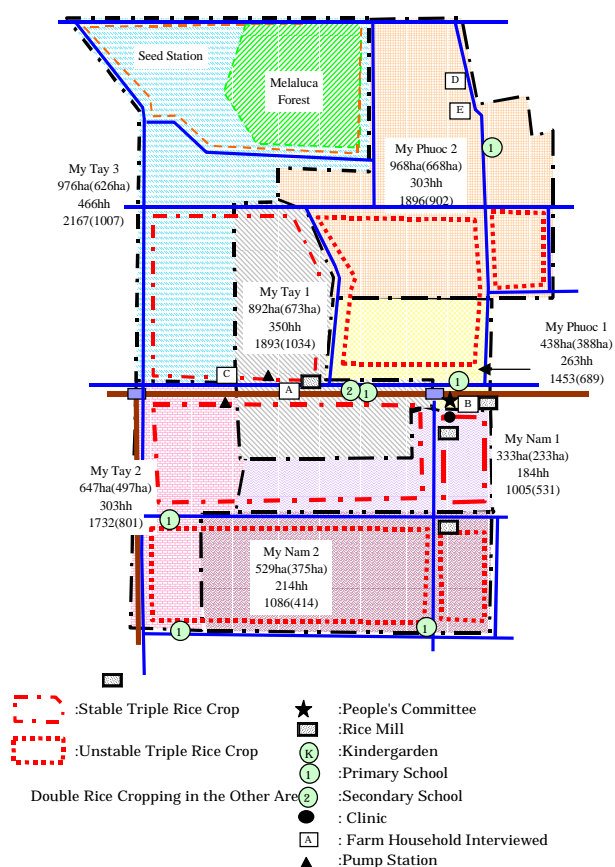
Item	Unit	
Total No. of Households	households	3,055
Total Land Area	ha	5,952
No. of Hamlet	hamlets	7
No. of Farm Households	households	2,861
Share of Farmers in Total Population	%	93.6
Landless Farm Household	households	133
Share of Landless HHs in Total Farm HHs	%	4.6
Poor Households	households	244
Share of Poor Households in Total Households	%	8.0
Hunger Households	households	0
Main Products		Rice
Average Farmland Area	ha/house	1.36
Average Income of Farm Household	VND/month	-
No. of School	schools	7
Primary School	schools	6
Secondary School	schools	1
No. of Health Station		1
No. of Market		2
No. of Cooperative/ Collective/Farmer's Group		30 collectives
No. of Member of Coop./ Collective/Farmer's Group	persons	1,181
No. of Women's Union		17
No. of Member of Women's Union	persons	470

1) Commune Background

My Quy Commune is one of 13 communes in Thap Muoi District. The commune consists of 7 hamlets. Total land area is 5,952ha, in which 3,856ha is farmland (64.8% of the total area). My Tay III hamlet has a forest of Melaleuca.

Land Use in My Quy Commune

Land Use	Area (ha)
Agricultural Land (Paddy Field)	3,856 (of which 2,716 is in dike system)
Orchard	240
Forest (melaleuca)	1,163
Residential Area	278
Special Use	337
Lake, pond, river, canal	78
Total	5,952



Total population of the commune is 11,232 with 2,083 households. Population is the 2nd largest in the district. Female heads households share 20% of the total households. There are 336 landless farm households (accounts 16% of the total farm households) and 85% of the villagers own land use certificates. Poor farm households are 244, which is 8.5%. Dike system is developed rather well and the inhabitants do not worry about flood.

2) Road Condition

Road from provincial center to My Quy is paved and in good condition. It takes 30 minutes by car from Cao

Lanh Town to the commune. Even in rainy season, cars can be used. The commune is flooded from mid-August to mid-December.

3) Public Services

There are 6 primary schools and 1 secondary school. My Tay 3 and My Nam 1 have no schools. There is one clinic in My Nam 1.

4) Economic Activities

The number of labors is 3,252 and more than 90% of labors in the commune is engaged in agriculture. Average land area of 1.36 ha is not large compared with other areas. My Tay 1, My Tay 2, My Nam 1 and a part of My Tay 3 practice stable three paddy cropping inside of dike system and My Nam 2, My Phuoc 1 and a part of My Phuoc 2 have unstable 3 crops. Area of orchard is 240ha, of which 94.5ha have already been improved and the rest 30ha are now on the way of improvement. Total paddy production in the commune was 44,308 ton in 1998. Cultivated area is 3,856 ha for W-S crop and 2,716 ha for S-A crop, yield is 5.5 ton/ha and 3.5-4.0 ton/ha respectively.

Paddy cultivation has increased from 2 crops to 3 crops as the development of canal system. Until 1973 most parts practiced only 1 crop. During 1978-1988, construction of Guyen Van Thiep Canal

expanded 2 crops. Furthermore, dike was constructed during 1994-1996 with farmers' contribution (partly provincial financial support), which made 3 crops possible. Agricultural products (paddy) are sold to the private traders coming by boats. Rice for self-consumption is brought in the small rice mill and polished. As for livestock, chickens and pigs are raised in the yard or around the house. Some are large-scale livestock farmers for sale but mostly are on small scale, and for self-consumption.

5) Commune Organization

There are 30 production collectives with 1,181 members and agricultural extension services are provided through these collectives. Additionally, there is an extension club consisting of 36 farm households and extension services are also provided by this club.

6) Problems of the Commune

(a) Agricultural Activities:

i. Agricultural machines

Introduction of agricultural machines such as combines and tractors is necessary in order to increase production efficiency.

ii. Capital

Loan from agricultural bank has limitation of the amount and additional investment is not possible. Capital for development of production is necessary.

iii. Price of products and inputs

While price of paddy is unstable and low, price of inputs such as fertilizer is high. This cannot make profits to the farmers.

iv. Cooperatives

Regarding the idea of joint purchase and use of materials and machines, some are willing to have a cooperative. However, general opinions are that each farmer has different opinion and it is difficult to get unification.

v. Diversification of production

Fruits trees and livestock as well as fishpond should be developed in order to increase agricultural income.

(b) Rural Infrastructure:

i. Road

Road should be paved for easy transportation even in rainy season. Road system in remote area, where only boat can access, should be developed.

ii. School

In order to increase education level of the farmers, education facilities are necessary.

iii. Electricity

Especially remote area needs electricity network for the use of production and daily life.

Wants Analysis (My Quy)

Item	Number	Remarks
Agricultural Production Machine	6	For production
Capital	4	For production, livestock, fishpond
Road	4	Pavement, develop in remote area
School	4	
Electricity	3	Develop in remote area, for production and daily life
Price	3	High price of rice, low price of inputs
Cooperative	2	
Agricultural Input	2	Fertilizer, pesticide
Dyke	1	
Water	1	Clean water for field
House	1	Stable house
Rice Milling Plant	1	
Animal Feeds Processing Plant	1	
Fishpond	1	

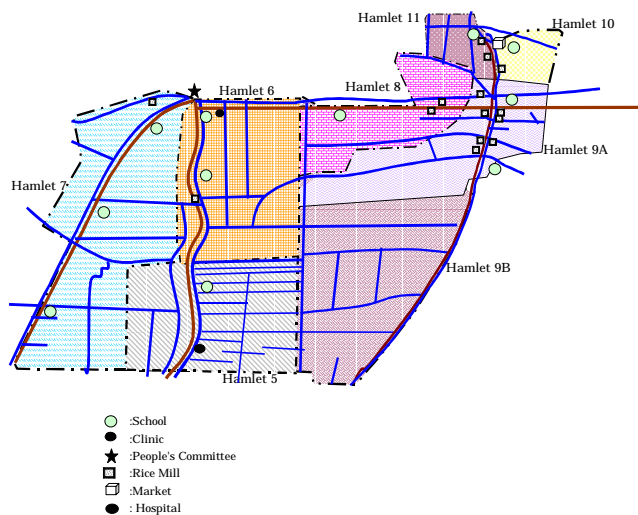
(5) My Thanh Nam

Socio-economic Data of My Thanh Nam Commune

Item	Unit	
Total No. of Households	households	2,504
Total Land Area	ha	1,992
No. of Hamlet	hamlets	14
No. of Farm Households	households	1,953
Share of Famers in Total Population	%	78.0
Landless Farm Households	households	170
Poor Households	households	253
Share of Poor FHHS in Total Households	%	8.7
Hunger Households	households	0
Main Products		Rice
Average Farmland Area	ha/house	0.75
Average Income for Farmers	tiêu VND	8.55
No. of School		3
Primary School	schools	1
Secondary School	schools	2
No. of Health Station		1
No. of Market	markets	1
No. of Cooperative/Collective/Farmer's Group		0
No. of Member of Coop./Collective/Farmer's Group	persons	0
No. of Women's Union		1
No. of Member of Women's Union	persons	562

1) Commune Background

Communities in Cai Lay District of Tien Giang Province have already existed for a long time. In



1972, a big commune with 11 hamlets was divided into My Thanh Bac (north) with 4 hamlets and My Thanh Nam (south) with 8 hamlets. This may be called as the establishment of the present My Thanh Nam. Total area of the commune is 1,992ha, Hamlets 10 and 11 have small land area. In the past 2 years, natural growth rate of population is 1.7% and there is no migration. Total population is 12,547. Hamlets 6 and 10 have large population. There are

2,608 households, in which 268 are poor farm households with their average monthly income under 120,000 VND/person. Houses are located along all roads and canals and density is high along main canals.

Land Use in My Thanh Nam

Land Use	Area (ha)
Paddy Filed	1,364
Orchard	409
Residential	219
Total	1,992

2) Road Condition

There are 5 main roads with total 19km length, 26 sub-roads with 53km length. Among them, only 4.3km is rock-embedded road, the rest is earthen road. All roads run along canals. Two lines of the main roads are passable by motorbikes in dry season (80% of the roads make car transportation possible), but in rainy season, no roads cannot be used and villagers should walk or use boats.

3) Water Resources

Rainwater is usually used for cooking and drinking. Poor households use canal water because they sometimes cannot buy enough amount of rainwater containers. There are 2 deep dug-wells that are used by 600 households. One well is operated privately and the neighbors can use it with fee of 1,700-2,000 VND/m³. Interlaced system of canals includes 14 canals of I level (19km length), 17 of II level (15.7km) and 12 canals in rice fields (13km). Area is flooded in October. Dike system is constructed in 1997, with 6.5km length covering 180ha.

4) Public Services

30% of total houses in the commune are permanent or semi-permanent and 70% are temporary houses made of simple materials. 2,477 households (95% of total households in the commune) are supplied with electricity. 18 households have telephones. Tree branches collected from home gardens and around the houses are usually used for fuel and husk also is bought at rice mill for cooking fuel. Every hamlets except Hamlet 9B have primary schools and there are 12 schools in total in the commune. 98% of the children attend school. There is one market, located along the national road No.1 in Hamlet 10. One clinic is located in Hamlet 5 with 5 physicians. Major diseases are Dengue fever and cholera.

5) Economic Activities

90% of total households are engaged in agriculture, 2% in trading (110 households are doing trade and many small sellers) and 8% in non-agriculture (mainly landless hired labors). All land except housing area is used for agriculture. Paddy is the main product of the commune. Fruits production depends on the climate. Most of the orchard is mixed fruits garden, and has not economic ally effective yet because of frequent flood damages. The area of specific fruits growing garden is only 5ha in the commune. Most of the farm households raise chickens, ducks and fish. There are 100,000 chickens, 3,500 pigs, 260,000 fish in the commune but livestock and fishpond are not developed and do not contribute to income generation and only for family consumption.

There are a few acid sulfate soil but no influence to the yield. Farmers practice 3 crops per year. The 2nd crop is constantly produced but the 3rd crop is not stable depending on flood condition. 6 ton/ha for W-S crop, 5 ton/ha for S-A and 4.5 ton/ha for A-W crop. Annual yield is 16 ton/ha. About 97km embankment is constructed for protection of the 3rd crop from flood. There are 12 private rice mills along the canals. Traders come to the commune and 95% of farmers sell their products to them. Most of the buyers are from this province and some are from Long An and Ben Tre provinces. The price of the products is not stable. Many farmers are trying to do VAC system to increase their income but still in a small scale and for self-consumption. The knowledge and technical level of VAC system is still low. Additionally, flood is the constraints to develop VAC system.

6) Commune Organization

There is no cooperatives and collectives. At present, all farming activities are carried out individually. Now, PC of Commune considers to set up a cooperative to provide good services such as irrigation water, land preparation, and supply of agricultural materials. Many farmers are willing to join if the cooperative is established. There is a Women's Union but it has no such activities as saving groups. Rich women can provide loan (by paddy or cash) to others individually.

7) Problems of the Commune

(a) Agricultural Activities:

i. Capital

The maximum bank loan can be borrowed increased to VND 4 million, but still fund is not enough to buy agricultural inputs. High price of agricultural materials often increases expenditure of production and income cannot cover the cost of production. Assistance from government /organizations is necessary to reduce input price and increase rice price.

ii. Agricultural Information

Visit by extension workers once a month is not enough. Also, information provided through extension services is not appropriate. More frequent and adequate assistance is necessary.

iii. Price of Products and Inputs

Price of paddy is low, unstable. Price of pesticide and fertilizer is not appropriate compared with price of products.

iv. Agricultural Machines

Labors in harvesting time are not enough and farmers need to hire the labors. If harvesting machine can be available easily, the difficulty to find the labors and cost can be reduced. Drying and storing paddy are also the problems.

v. Seeds

New and good varieties of seeds such as strong for brown hoppers are necessary. Seeds are usually provided by Agricultural Department but farmers need new kinds which are grown in short time period, strong and provide high yield.

vi. Irrigation Water

Water is not enough for irrigation in dry season.

vii. Diversification of Production

Agricultural production is mainly rice now but rice only cannot make the commune rich. Therefore, the commune wants to develop more gardens, livestock and fishponds. Diversification of agricultural is necessary such as livestock, processing industry (e.g. modern mills).

(b) Rural Infrastructure:

i. Road

Roads and canal systems are not enough. Road system, especially in Hamlet 9 should be developed.

ii. School

Low education level makes farmers difficult to transfer technique and information.

Education level should be improved to get agricultural technique for the development of the commune.

iii. Water

Drinking water to every house in the commune is necessary.

iv. Dike

Dike system is not appropriate for flood protection and need improvement.

Wants Analysis of My Thanh Nam

Item	Number	Remarks
Capital	14	for daily life, agricultural production, livestock, education, Low interest rate
Road	11	
Training/Technique Knowledge	10	for agricultural production, breeding, plant protection
School	10	
Clean Water	8	
Price of Products	7	Rice price should be high and stable.
Price of Agricultural Input	6	Price should be low.
Agricultural Machine	5	
Health	5	Need health station
Embankment	4	
Seed	2	Good seeds strong for insects/diseases, suitable to climate conditions
Hydraulic System	2	Irrigation and drainage system should be improved
Price of Livestock	2	Price should be stable.
Electricity	1	
Agricultural Chemicals	1	
Storing Facilities for Agricultural Products	1	
Rice Milling Plant	1	
Storing Facility for Fertilizer	1	

I.5.4 Individual Information of the Surveyed Households

(1) Tan Cong Chi

1) Production and Area of Cultivated Land

Area of Farmland and Production by Household

	Household 1	Household 2	Household 3	Household 4
Area of Farmland	6ha	1.2ha	5.5ha	3ha
Products	Paddy	Paddy	Paddy	Paddy
Production	24-27 ton for W-S crop, 12-15 ton for S-A crop	8,16 ton/year for 2 crops	25 ton for W-S crop, 15-16 ton for S-A crop	18 ton for W-S crop, 15 ton for S-A crop
Yield	4-4.5 ton/ha for W-S crop, 2-2.5 ton/ha for S-A crop	3.4 ton/ha per crop	4.5 ton/ha for W-S crop, 2.7-2.9 ton/ha for S-A crop	6 ton/ha for W-S crop, 5 ton/ha for S-A crop
Livestock	1-2 pigs, 20 chickens	None	Some chickens, fish	Some chickens, fish
Non-agricultural Economic Activities	None	Hired labor, Management Board Member of Collective	None	None

All 4 households produce only paddy and household 2 with a small land has a supplementary job. Household 1 has the largest farmland among 4 households. Livestock in small scale are operated for family consumption. Household 2 has only small land and no livestock. Land of household 4 yields more than other households.

2) Agricultural Income/Non-agricultural Income

Annual Income and Expenditure related Agricultural Activities

(Unit: VND)

Item	Household 1	Household 2	Household 3	Household 4
Agricultural Income	60.5 million	2.6 million	26.5 million	49.5 million
Non-agricultural Income	None	5.9 million	None	None
Expenditure	19.8 million	3.8 million	13.6 million	5.8 million

Household 1 with the largest land area gets the highest agricultural income. Non-agricultural income of household 2 is larger than agricultural income. Total income of household 2 is much lower than other 3 households.

3) Marketing

Private traders often come to the district in harvest time and visit each farmer to buy paddy or farmers bring paddy to the collecting place to sell the traders. When the price of paddy is not good, farmers sometimes keep paddy waiting for the price recovery.

4) Living Conditions

Housing Conditions

Item	Household 1	Household 2	Household 3	Household 4
Years of Living	30 years	8 years	4 years	9 years
House	Temporary	Semi-permanent	Permanent	Semi-permanent
Water	Canal water in tank using purification materials	Private drilled well	Private drilled well	Canal water and rain water
Electricity	None	None	Yes	Yes
Fuel	Tree branches collected around the house	Firewood bought from traders	Branches of trees in home garden	Tree branches collected around the house
Health Condition	Water born disease	Fever, Water born disease	Liver diseases	Flue

All households except household 1 have been living here for less than 10 years. Water sources for daily life are 3 types, namely, canal, well and rain water. All households use firewood. Three households collect wood around their houses and 1 household buy wood.

5) Problems

Summary of Problems

Household 1	Household 2	Household 3	Household 4
1.Shortage of agricultural labor 2.Loss of production during harvest	1.Insufficient support by extension workers 2.Lack of fund for production	1.Lack of agricultural machine 2.Lack of fund for production 3. Low fertility of land 4. No job in flood time 5.Hard working and poor living condition	1.Underdeveloped road system 2.Shortage of clean water

Problems cover many fields. Considering the problems at commune level, farm households need fund (capital) for production strongly.

(2) Phu Thanh A

1) Production and Area of Cultivated Land

Area of Farmland and Production by Household

	Household 1	Household 2	Household 3	Household 4	Household 5
Area of Farmland	0.45ha	2.5ha	1.6ha	1.5ha	2.0ha
Products	Paddy	Paddy	Paddy	Paddy	Paddy
Production	2.4 ton for W-S crop, 1.6 ton for S-A crop	17.5 ton for W-S crop, 12.5 ton for S-A crop	7.5 ton for W-S crop, 5 ton for S-A crop	10 ton for W-S crop, 7 ton for S-A crop	10-12 ton for W-S crop, 7-8 ton for S-A crop
Yield	5.3 ton/ha for W-A crop, 3.6 ton/ha for S-A crop	7 ton/ha for W-A crop, 5 ton/ha for S-A crop	4.7 ton/ha for W-S crop, 3.1 ton/ha for S-A crop	6.7 ton/ha for W-S crop, 4.7 ton/ha for S-A crop	5 ton/ha for S-W crop, 6 ton/ha for S-A crop
Livestock	Several chickens, fish	50 chickens, fish	1 pig, 3 chickens, 3 ducks, fish	Some pigs, chickens, fish	None
Non-agricultural Income Sources	Remittance from children	Teacher, Fishery, Renting agricultural machines	Pension	Coffee shop/Billiard shop, Selling pig/chicken/fish	None

All households produce only paddy and Household 2 and 4 have supplementary jobs. Household 1 has the smallest farmland area. The land areas of 5 households are not large. Livestock is raised on a small scale and mostly for family consumption.

2) Agricultural Income/Non-agricultural Income

Annual Income and Expenditure of Agricultural Activities

(Unit: VND)

Item	Household 1	Household 2	Household 3	Household 4	Household 5
Agricultural Income	4.6 million	45.5 million	13.2 million	1.7 million	6.4 million
Non-agricultural Income	4.5 million	11.2 million	3.6 million	13.7 million	None
Expenditure	3.0 million	25.9 million	14.8 million	10.9 million	5.7 million

Household 2 has the largest income because of a large farmland and a few kinds of non-agricultural income sources.

3) Marketing

Private traders visit each farmer to buy paddy at the harvest time or farmers bring paddy to the collecting place to sell the traders.

4) Living Conditions

All households have lived here for more than 20years and constructed stable houses.

All households are connected to electricity line. Canal water is used after filtrated for drinking and cooking. Different kinds of fuel sources are used in this commune.

Housing Conditions

Item	Household 1	Household 2	Household 3	Household 4	Household 5
Years of Living	24 years	25 years	21 years	20 years	50 years
House	Permanent	Permanent	Permanent	Permanent	Semi-permanent
Water	Canal water after purified	Canal water after boiled and passed through filter	Canal water	Canal water using filter	Canal water using filter
Electricity	Yes	Yes	Yes	Yes	Yes
Fuel	Kerosene	Firewood collected around the house	Husk is bought at rice mill	Tree branches collected around the house, paddy husk, oil	Tree branches collected around the house
Health Condition	Water disease born	Fever	Water disease born	Fever	Fever

5) Problems

Summary of Problems

Household 1	Household 2	Household 3	Household 4	Household 5
Shortage of agricultural labor	1.Lack of transportation of products 2.Low price of paddy 3.High price of agricultural inputs	No land use certificate and unqualified to borrow money from bank	1.Lack of water supply system 2.Need of agricultural machines 3.High price of agricultural inputs	1.Need of agricultural machine 2.High price of agricultural inputs

As the same situation with other communes, prices of inputs and products have a problem. Also, labor is in shortage and agricultural machines are required.

(3) Phuong Thing

1) Products and Area of Cultivated Land

Area of Farmland and Production by Household

	Household 1	Household 2	Household 3	Household 4	Household 5	Household 6	Household 7
Area of Farmland	10ha for paddy, 5ha for home garden	3ha	2.3ha	3.1ha	Landless	0.6ha	1ha
Products	Paddy, fruits	Paddy	Paddy	Paddy	None	Paddy	Paddy
Production	40 ton for W-S crop, 20 ton for S-A crop	6 ton for W-S crop, 4 ton for S-A crop	7 ton for W-S crop, 5 ton for S-A crop	8.8 ton for W-S crop, 5.1 ton for S-A crop	None	3.6 ton for W-S crop, 2.4 ton for S-A crop, 2.4 ton for A-W crop	7 ton for W-S crop, 5.5 ton for S-A crop, 5 ton for A-W crop
Yield	4 ton/ha for W-S crop, 2 ton/ha for S-A crop	2 ton/ha for W-S crop, 1.3 ton/ha for S-A crop	3 ton/ha for W-S crop, 2.2 ton/ha for S-A crop	2.8 ton/ha for W-S crop, 1.6 ton/ha for S-A crop	None	6 ton/ha for W-S crop, 4 ton/ha for S-A crop, 4 ton/ha for A-W crop	7 ton/ha for W-S crop, 5.5 ton/ha for S-A crop, 5 ton/ha for A-W crop
Livestock	10 ducks, 10 chickens, 3 pigs, fish	Some pigs, chickens	None	Fish	None	Some chickens, ducks, fish	2 pigs
Non-agricultural Income Sources	None	Small shop	None	Threshing service, Selling fish	Wage labor in agricultural works	Salary of teacher	Selling pigs

Household 1 produces fruits in addition to paddy and sometimes sells them. Household 1 has the largest farmland and Household 5 has no farmland. Yield is large in Households 6 and 7, in spite of their small size of land. Livestock is still small scale and mostly for family consumption.

2) Agricultural Income/Non-agricultural Income

Annual Income and Expenditure related Agricultural Activities

(Unit: VND)

Item	Household 1	Household 2	Household 3	Household 4	Household 5	Household 6	Household 7
Agricultural Income	102 million	13.6 million	20.4 million	24 million	2.7 million	9.1 million	10.8 million
Non-agricultural Income	None	0.6 million	None	6.7 million	0.2 million	2.5 million	3.2 million
Expenditure	47.3 million	14.7 million	12.7 million	17.7 million	1.5 million	8.1 million	18.7 million

Since household 1 has the large farmland, agricultural income is the largest among 7 households. Besides, household 1 spends a lot for production, mainly for fertilizer, pesticides, fuel of agricultural machines.

3) Marketing

Private traders often come to the district in harvest time and visit each farmer to buy paddy. Farmers sometimes bring paddy to the collecting place to sell the traders. When the price of paddy is not good, farmers sometimes keep paddy waiting for the price recovery.

4) Living Conditions

Housing Conditions

Item	Household 1	Household 2	Household 3	Household 4	Household 5	Household 6	Household 7
Years of Living	21 years	30 years	14 years	?	15 years	?	?
House	Permanent	Permanent	Permanent	Permanent	Temporary	Semi-permanent	Permanent
Water	Canal water for washing, rain water for cooking	Rain water for drinking/cooking	Canal water, rain water after boiled	Canal water, collected rain water	Canal water, collected rain water	Canal water, collected rain water	Canal water, collected rain water
Electricity	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Fuel	Firewood from home garden	Trees cut around the house (if not enough, buy husk at rice mill)	Trees in home garden, husk is bought at rice mill	Tree branches are collected around the house	Tree branches are collected around the house	Firewood is collected around the house, husk is bought at VND 1,000/bag	Firewood is bought at VND 60,000/0.3m ³ , husk at VND 600/bag
Health Condition	Fever, flue	Fever, flue	Water born disease, fever	Water born disease, flue	Water born disease, fever	Water born disease	Respiratory disease, fever

All households are connected to electricity line. Canal water or rainwater is used for drinking and cooking. Most of the households collect firewood around their houses and some buy husk at rice mill.

5) Problems

Summary of Problems

Household 1	Household 2	Household 3	Household 4	Household 5	Household 6	Household 7
1.Low price of paddy and high price of inputs	1.Acidity of water and land	1.Shortage of land and labor	1.Shortage of labor	1.Need of fund for fishpond	1.Inconvenient transportation from field to the house	1.Lack of capital for buying machinery
2.Acidity of land	2.Conflict on irrigation	2.Need of fishpond and livestock	2.Lack of capital for production	2.No jobs in the commune during flood time	2.High price of inputs	2.Need of water supply
3.Insufficient extension service	3.Products damaged by flood	3.Inappropriate prices of products and inputs	3.Low price of paddy	3.Lack of capital for production	3.Lack of capital for production	3.Development of roads on the both sides of canal
4.Damage of fishpond in flood time	4.Lack of land and fund for production		4.Need of electricity	4.Boat is necessary	4.Boat is necessary	4.Low quality of hospital
5.Need of dike construction	5.Need of electricity, road, school, drinking water		5.Need of roads			5.Need of high school
			6.Low quality of house			

Many farmers consider that fund for production is in shortage and prices of the paddy and inputs are not appropriate.

(4) My Quy

1) Products and Area of Cultivated Land

Area of Farmland and Production by Household

	Household 1	Household 2	Household 3	Household 4
Area of Farmland	3.0ha for paddy, 0.3ha for fruits garden	3.0ha for paddy, 0.3ha for home garden	2ha	0.39ha
Products	Paddy, fruits	Paddy, fruits	Paddy	Paddy
Production	24 ton for W-S crop, 18 ton for S-A crop, 18 ton for A-W crop	20 ton for W-S crop, 15 ton for S-A crop, 15 ton for A-W crop	5 ton for W-S crop, 3.4 ton for S-A crop	1.76 ton for W-S crop, 0.86 ton for S-A crop
Yield	8 ton/ha for W-S crop, 6 ton/ha for S-A crop, 6 ton/ha for A-W crop	5 ton/ha for W-S crop, 3.8 ton/ha for S-A crop, 3.8 ton/ha for A-W crop	5 ton/ha for W-S crop, 3.4 ton/ha for S-A crop	4.5 ton/ha for W-S crop, 2.2 ton/ha for S-A crop
Livestock	60 pigs, fish	2 pigs, fish	None	15 chickens
Non-agricultural Income Sources	Selling pigs	None	None	Hired labor in agricultural works

Household 1 and 2 practice 3 paddy cropping as well as fruits production. Household 1 has the highest yield and Household 4 has the lowest yield in every cropping season among 4 households. All paddy production in Household 4 is consumed by the family and not left for sale. Livestock is in small scale and mostly for family consumption except Household 1.

2) Agricultural Income/Non-agricultural Income

Annual Income and Expenditure related Agricultural Activities

(Unit: VND)

Item	Household 1	Household 2	Household 3	Household 4
Agricultural Income	8.2 million	31.2 million	31.2 million	1.4 million
Non-agricultural Income	3 million	None	None	None
Expenditure for Production	44.6 million	0.3 million	11.8 million	2.6 million

Household 4 has a small land and this size is not enough to get loan from banks.

3) Marketing

Private traders often come to the commune in harvest time and visit each farmer to buy paddy or farmers bring paddy to the collecting place to sell the traders. When the price of paddy is not good, farmers sometimes keep paddy waiting for the price recovery.

4) Living Conditions

Housing Conditions

Item	Household 1	Household 2	Household 3	Household 4
Years of Living	24 years	24 years	59 years	24 years
House	Permanent	Permanent	Permanent	Temporary
Water	Canal water using filter	Canal water using filter	Rain water, pond water	Rain water in rainy season, canal water in dry season
Electricity	Yes	Yes	Yes	No
Fuel	Firewood from home garden	Trees cut in home garden	Trees are cut from his melaleuca forest	Tree branches collected around the house
Health Condition	-	-	Water born disease	Water born disease

All households have lived here for a long time. Household 4 has still temporary house and no electricity. Canal water or rainwater are used for drinking and cooking. All households use firewood as fuel collected in or around their houses.

5) Problems

Summary of Problems

Household 1	Household 2	Household 3	Household 4
Difficulty of drying paddy in rainy season	1.Low prices of products and inputs 2.Difficulty of drying paddy during rainy season	Lack of agricultural labors	1.Lack of capital for production 2.Small land area 3.Low quality of drinking water

(5) My Thanh Nam

1) Production and Area of Cultivated Land

Area of Farmland and Production by Household

	Household 1	Household 2	Household 3	Household 4	Household 5	Household 6
Area of Farmland	0.5ha for paddy, 0.3ha for home garden	4.0ha for paddy, 0.5ha for home garden	0.22ha	0.3ha	0.6ha	1ha
Products	Paddy, vegetable	Paddy, fruits	Paddy, fruits	Paddy	Paddy	Paddy
Production	4 ton for W-S crop, 2 ton for S-A crop, 1.5 ton for A-W crop	24 ton for W-S crop, 16 ton for S-A crop, 12 ton for A-W crop	1.44 ton for W-S crop, 1.32 ton for S-A crop, 1.1 ton for A-W crop	1.95 ton for W-S crop, 1.5 ton for S-A crop, 1.5 ton for A-W crop	3.6 ton for W-S crop, 2.4 ton for S-A crop, 2.4 ton for A-W crop	7 ton for W-S crop, 5.5 ton for S-A crop, 5 ton for A-W crop
Yield	8 ton/ha for W-S crop, 4 ton/ha for S-A crop, 3ton/ha for A-W crop	5-6 ton/ha for W-S crop, 4 ton/ha for S-A crop, 3 ton/ha for A-W crop	7 ton/ha for W-S crop, 6 ton/ha for S-A crop, 5 ton/ha for A-W crop	6-6.5 ton/ha for W-S crop, 5 ton/ha for S-A crop, 5 ton/ha for A-W crop	6 ton/ha for W-S crop, 4 ton/ha for S-A crop, 4 ton/ha for A-W crop	7 ton/ha for W-S crop, 5.5 ton/ha for S-A crop, 5 ton/ha for A-W crop
Livestock	Some chickens	20 pigs, some chickens and ducks, fish	Some pigs, 40 chickens, 20 ducks, fish	Chickens, pigs, fish	Chickens, ducks, fish	2 pigs, chickens, ducks, fish
Non-agricultural Income Sources	None	Selling pigs	Salary of PC Commune, Drinking shop	Selling eggs, Selling pigs	Salary of teacher	Selling pigs

All households practice 3 paddy cropping as well as fruits, vegetable and livestock. Household 2 has the largest farmland and then the highest production. Livestock is rather supplementary income source and for the family consumption in Household 2 and 4.

2) Agricultural Income/Non-agricultural Income

Annual Income and Expenditure related to Agricultural Activities

(Unit: VND)

Item	Household 1	Household 2	Household 3	Household 4	Household 5	Household 6
Agricultural Income	19.2 million	32 million	3.4 million	8 million	9.5 million	10.8 million
Non-agricultural Income	None	None	3.8 million	53.9 million	2.5 million	3.2 million
Expenditure for Production	21.4 million	6.8 million	1.7 million	26.6 million	6.9 million	18.6 million

3) Marketing

Private traders often come to the district in harvest time and visit each farmer to buy paddy or farmers bring paddy to the collecting place to sell the traders. When the price of paddy is not good, farmers sometimes keep paddy waiting for the price recovery.

4) Living Conditions

Living Conditions

Item	Household 1	Household 2	Household 3	Household 4	Household 5	Household 6
House	Permanent	Permanent	Permanent	Permanent	Permanent	Permanent
Water	Rain water kept in container for a whole year	Rain water for cooking and drinking, drilled well for washing	Pond water	Rain water and pond water	Canal water, collected rain water	Canal water, rain water collected
Electricity	Yes	Yes	Yes	Yes	Yes	Yes
Fuel	Firewood from home garden	Trees cut in home garden, Biogas from livestock	Trees are cut around the house	Tree branches collected around the house	Trees collected around the house, husk bought	Firewood bought, husk bought
Health Condition	Flue, fever, Dengue fever	Water born disease, fever	Good	Water born disease	Water born disease	Fever, respiratory disease

All households are connected to electricity line. Rainwater is mainly used for drinking and cooking. Most of the households collect firewood around their houses and only Household 2 use biogas.

5) Problems

Summary of Problems

Household 1	Household 2	Household 3	Household 4	Household 5	Household 6
1.Lack of irrigation system 2.Bad road system 3.Lack of agricultural information 4.Inconvenient location of paddy field 5.Lack of agricultural labor to be hired	1.Bad rural road 2.lack of drinking water 3.Lack of irrigation water 4.Inappropriate prices of paddy and inputs 5.Lack of fund for embankment 6.Need of flood-free home garden for fruits	1.Shortage of capital for production 2.Lack of medical staff 3.Flood damage 4.Shortage of labors to be hired	1.Flood damage 2.Low price of products 3.Bad accessibility to health center	1.Lack of transportation of paddy from the field to the house 2.High price of inputs 3.Shortage of capital for production	1.Shortage of capital for buying machinery 2.Lack of water supply 3.Need upgrading of quality of house 4.Need of high schools 5.Need roads of both sides of canal

I.5.5 Findings

(1) Landless and poor households

Landless farmers are found in all 5 communes. My Quy has the lowest share of the total farm households (4.6%) and Phu Thanh A shows the largest share of 26.4%. Poor households also exist in all communes. Among them, Tan Cong Chi has the largest share of the total households (30.6%) and My Thanh Nam has the smallest share (8.7%). Additionally, My Quy and My Thanh Nam have no hunger households. Among shows these communes there exist a large disparity of economic level.

(2) Mono-culture characteristics

Land is mainly reserved for growing rice (more than 80% of total land area) in all communes except My Thanh Nam where paddy occupied 68.5% of total land area and 20.1% as orchard. The average area of farmland per house is the largest of 2.78ha in Tan Cong Chi and the smallest of 0.75ha in My Thanh Nam. Fruit production, livestock and fishery, etc. are very small scale and mostly for self-consumption. Because the rice monoculture characteristics, the area of cultivated land is and the yield affect heavily on income structure of the farmers.

(3) Changes in the rice cropping pattern among the communes

Although main rice crop is practiced differently by farmers in the surveyed communes, all communes have stable 2 cropping of Winter-Spring and Summer-Autumn crops. The yield differs from one commune to another such as from 3.5 ton/ha (My Quy) to 6.5 ton/ha (Phuong Think). Among the investigated communes, My Quy and My Thanh Nam grow unstable 3rd crop of Autumn-Winter crop with yield of 4.5 ton/ha. The 3rd crop can be practiced with construction of dike system.

(4) Farmer's organizations

All communes have farmer's groups and production collectives exist in Tan Cong Chi, Phu Thanh A and My Quy. Many farmers consider the importance and necessity of cooperatives and they are willing to join if they are established,

(5) Farmers' income and expenditure

There is a big difference in annual income of farmers from agricultural activities. The lowest annual income per household is found in My Quy of 1.4 million VND and the highest of 102 million VND in Phuong Think. The difference is somewhat 73 times among communes which depend on natural conditions for growing rice, such as zones which are suffered from acid sulfate soil, saline water and irrigation system and farm size. Some of the households have non-agricultural activities such as trading, governmental staff, some small businesses, etc., which are sometimes larger income sources than the agriculture.

Annual expenditures for agriculture also vary among the households and the communes. The commune which has lowest expenditures is 0.3 million VND/household in My Quy, and the highest is 44.6 million VND/household which has a large paddy field and high yield of rice.

(6) Size of farmland

The farmland area differs largely from 0.22ha (My Thanh Nam) to 10ha (Phuong Thih). The household with the smallest land has rather high yield of rice and non-agricultural income. The household with the largest area has the highest income in the all surveyed communes.

(7) Role of the institutions assisting agricultural production

The organization and institutions of the government that supply materials, machinery to farmers are weak. In such situation, the farmers mainly depend on other farm households and private trade system to meet their demands. The private trade system is especially efficient in the supply of agricultural materials such as fertilizers, chemicals and also loan some times.

(8) Farmer's problems and needs regarding production

- Capital for production is in shortage and many farmers borrow money from individual sources with high interest rate. Many farmers want to develop livestock, fishpond and intensive agricultural activities. Farmers need low interest rate loan from bank with larger amount.
- Price of the products is low and fluctuates. Additionally, the price of input materials such as fertilizer, pesticides and seeds, etc. is high and then farmers cannot get enough profits. Farmers always sell their products to private collectors but it is difficult for farmers to get advantages.
- Agricultural machines such as thresher, dryer, plow, water pumps, etc. are necessary to increase productivity. The rental of machines from the private owners varies and the farmers often needs to wait for their order in the busy farming season.

(9) Farmer's problems and needs regarding rural infrastructure

- For easy transportation, road/canal systems should be developed. Road level should be raised to avoid destruction by flood. Canals should be dredged and excavated in order to get enough water for irrigation and transportation in dry season.
- Every year farmer's fund is mobilized to build dikes, but the dikes are damaged easily by flood. Also, as the houses and farmland are damaged and destroyed by heavy rain and flood, villagers need to construct or repair them every year. Therefore, embankment for stable living and crop, and flood prevention is necessary.
- The number of secondary and tertiary schools is not enough and children who want to get higher education have to go to other commune/district. Also, the existing facilities are poor in the quality.

- Farmers need electricity not only for production but also for daily life.
- Drinking water supply is necessary because acid soil makes water inappropriate for drinking if it rains in some places. Canal water is also polluted by chemicals and sometimes causes diseases.

I.6 Recommendation

Based on the results of the RRA and the Socio-economic Survey on Rural Households and various information obtained from the hearing, discussion, and documents, etc. with farmers and governmental staff, the following recommendations regarding farmers' organization are suggested in order to implement the targets of Master Plan.

- Farmers have made a lot of efforts to protect their properties from flood every year by individual and groups. Stable and solid dike system is required for the farmers and the governmental support is essential. The agreement of the farmers, however, should be reached on introducing rotation system of management of small dikes. Therefore, the survey to confirm the intention of the inhabitants to be covered by the activities should be implemented as soon as possible.
- Many farmers join various kinds of groups with different purposes. Most of them are small scale and informal. The farmers consider that some formal organizations are necessary for development of their production and improvement of their living conditions. The activities to be implemented by the organization include joint collecting and selling products, supply of input materials, loan with enough amount and low interest rate, etc. However, there is still not a few farmers with distrust of new type cooperatives because of the failure of the old cooperatives. In order to change their attitudes, the government should make efforts to diffuse the objectives of the modern cooperatives and contents of the activities with Cooperative Law.
- In order to make farmer's organization stable and strong, it is most important to identify, good leaders among farmers and good key persons among the governmental staff to work together. If there are appropriate leaders and key persons with well understanding of concepts and objectives of the organizations, farmers will follow them to join and expand organizations with their initiatives.