
Working Group 1

Garbage Management in Lampung Municipality

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1. Introduction

For the Overseas Field Work 1999, Working Group One conducted research in Lampang Municipality (hereafter referred to as the Municipality) in Lampang Province, Northern Thailand. We were assigned the project to study the Municipality's garbage management, analyze the problems using the Project Cycle Management method (hereafter referred to as PCM) and recommend actions to remedy the problems.

1-1 About Lampang Municipality

The Municipality is located in Lampang Province in Northern Thailand. The population of the Municipality is just over 70,000, which is divided among 29 communities. The Municipality is classed as a *Tedsaban Nakorn*, requiring of it many responsibilities to provide civil services to its citizens. The Municipality is made up of eight *tambon* and covers an area of 22.17 km². (see Appendix I)

On April 30th of this year, the Municipality, realizing the damaging effects that its activities were having on the environment, established the Lampang Environmental Committee. The Committee found six problem areas, one of which was garbage collection and disposal. The amount of garbage produced in the Municipality has been increasing steadily. Referring to table 1, one can see that the garbage production per capita in 1997 was 1.09 kg/person/day. Despite Lampang's having a lower per capita income and suffering from the effects of the Asian economic crisis, it is surprising that its quantity was greater than Tokyo, Mexico City, and London. However, garbage production has been reduced in the past year to 0.93kg/person/day, perhaps due to the concerted efforts of the Municipality and communities.¹

Garbage management falls under the jurisdiction of the Public Health and Environmental Division and the Sanitation Engineering Department, which will be responsible for the management of a new disposal site.

2. Research Methodology

2-1 Interviews and surveys

The main method of information gathering was through interviews and literature analysis. We visited the following places to conduct our interviews: the Municipal office; the GBC Group, a private firm contracted by the Municipality to carry out garbage collection; a Municipal official who explained to us the Paytai Group, a private firm contracted by the Municipality to manage the landfill; four recycle shops; two of three communities that were beneficiaries of a UNDP project; and three non-UNDP communities.

During our investigation we realized that the main issue lay not with the Municipality's handling of garbage

Table 1: Garbage Produced Per Day in Various Cities of the World 1997

City	Garbage Produced kg/person/day
Los Angeles	3.00
New York	1.86
Lampang	1.09
Tokyo	1.00
London	0.86
Mexico City	0.43

Source: Recycling, Oxford University Press, 1998.

management, but with the volume of garbage disposed from the communities to the landfill. Therefore, to better understand households' garbage management habits, we conducted a door-to-door survey in four communities, reaching seventy-six households. The questions were designed to gauge the households' sorting and recycling habits. The results of the survey are shown in Appendix II.

3. Project Cycle Management

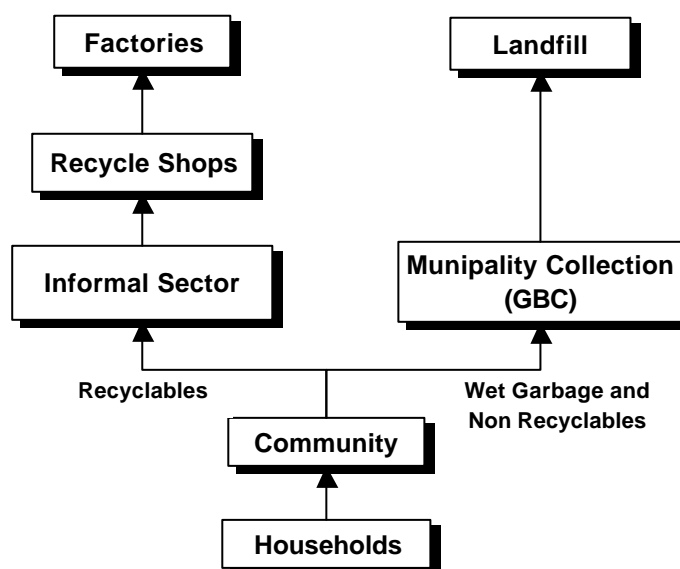
The main aim of Overseas Field Work 1999 in Lampang province was to offer GSID students an opportunity to apply the PCM Method to a real life situation. After gathering information and data, problems were analyzed and recommendations for future action were developed. The PCM method is a tool for managing the entire cycle of a development project – from formulation, implementation and evaluation. Here, the PCM method focuses only on the formulation of a plan. The PCM method as we used it has three parts: Participation Analysis, Problem Analysis, and Objective Analysis. In section four, the report will diverge from the PCM slightly and present Approach Development, and Recommendations².

3-1 Participation Analysis

In this step we have identified the conditions and characteristics of the agents involved in garbage collection and disposal in the Municipality. To best show the more prominent agents, we have looked at each stage in the path of garbage (see Figure 1).

Most garbage is produced at the household level since there is very little industrial presence in Lampang. Naturally, the households are within one of the twenty-nine communities in Lampang. In three of the twenty-nine communities the UNDP conducted a program aimed at improving garbage management. The program was very successful, but it was conducted in only three of twenty-nine communities (for more information about the UNDP

Figure 1 Path of Garbage



¹ Calculated from the Municipality's population and garbage volume figures for 1998.

² These two sections are adapted for this report from the PCM method. *Approach development* replaces the *project approach* and *project*

communities, refer to Appendix III). There are still twenty-six communities that do not have a centrally planned garbage management program. Hereafter, when this report refers to the community level, it refers to these twenty-six. From this level, the garbage takes one of two routes: recyclable garbage and non-recyclable garbage.

Recyclable garbage is collected from households by the informal sector. This informal sector is made up of middle-men – or semi-organized groups – that treat the collection of recyclables as an occupation, and the scavengers, who are those less fortunate people who depend on collection of recyclables to eke out a living. The middle-men buy recyclables from households and in turn sell them to recycle shops for a profit. That means that these groups are interested in making a profit and improving their efficiency. However, it is important to understand the difference between the middle-men and the scavengers: scavengers are more likely to sort through garbage to find recyclables whereas semi-organized groups are not because of the time cost and its negative effect on productivity and profitability. In a sense, the scavengers collect those materials that the informal sector cannot be bothered to collect. The informal sector then sells the recyclables to the recycle shops. The recycle shops break down and sort the materials into types, for example plastics, glass, iron, metals, paper, etc. The broken down materials are then sold throughout the nation to manufacturers and raw material suppliers for reuse or recycling.

It is important to realize that the collection and disposal of recyclable materials is left completely to the private sector. The only involvement of the public sector is in the monitoring of safety and environmental impact. There are no subsidies or technical support from the public sector to enterprises in the recycling business.

The second path that garbage takes is the path of wet garbage and non-recyclable garbage. This type of garbage is collected at the household level, and disposed of daily into bins dispersed throughout the community, which are supplied by the Municipality. These bins are expected to be emptied daily by a private company contracted by the Municipality called the GBC Group. The GBC Group has its headquarters in Bangkok and carries out garbage collection in many districts of Bangkok as well as other municipalities throughout Thailand. Its revenues come from three sources: first, the Municipality's lump sum payment as outlined in the five year contract; second, from household collection of a waste management fee, 50% of which must be forwarded to the Municipality; and lastly, from the proceeds of any collection and sale of recyclables.

The GBC Group then disposes of collected garbage into a landfill operated by the Paytai Group located in Ban Huay Lor, a neighbouring village about 14km outside the Municipality. The present landfill will reach capacity within this year, but it is being enlarged to give it another two years of life. The Paytai group was set up with the sole purpose of providing and managing a disposal site for the Municipality's garbage. Both the company and the land are owned by the mayor of Ban Huay Lor; this creates a suspicious conflict of interest.

In two years, the Municipality expects operations of a new disposal site to begin. Whereas the past landfill and the present landfill are admittedly poorly managed ecologically, the new landfill will utilize modern technology and will meet international standards of environmental safety. The project is financed by the Japanese OECF and has been advised by German engineers. This new disposal site has an expected life of at least thirteen years but it can be extended with better garbage management.

3-2 Target Group

In deciding whom the target group of the project should be, we debated between “the communities” and “the

Municipality”. Finally, our decision was based on the answer to the question: “Whose problem the project is intended to solve”³. The answer was: “the Municipality’s”. The argument is that the Municipality has a responsibility to the taxpayers to dispose of garbage; the taxpayers are indifferent to the method, as long as the end result is the same – garbage is disposed. Therefore, the project will benefit the Municipality in that it will facilitate it in fulfilling its responsibility.

The target group should not be confused with the group that will become the direct recipient of the project. As you will see later, most of our recommendations are aimed at changing the habits of the households; however, the result of these actions will benefit the Municipality

3-3 Problem Analysis

3-3-1 The Core Problem

As a result of our data analysis, we determined that the core problem with regards to the Municipality’s garbage management is **the volume of garbage per capita that is disposed into the landfill is too great**. This problem will hereafter be referred to as the “core problem” (see Figure 2).

Since we had decided the core problem, we must better understand the causes of the problems in order to develop remedies to them; likewise, we must determine the effects of the problem in order to better understand our objectives for the project.

3-3-2 The Direct Effects

The core problem has the following effects (see Figure 2):

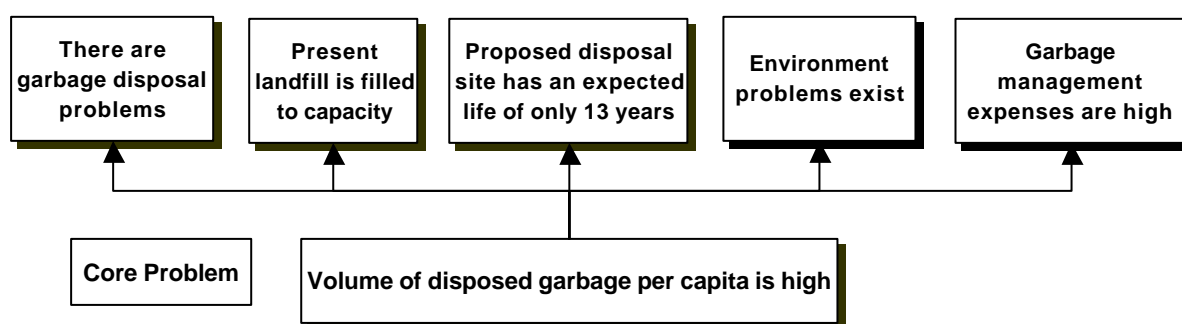
1) **There are garbage disposal problems**

The present volume of garbage exceeds the capacity of the GBC group to collect it effectively. Many community leaders in our interviews commented that often garbage containers are not completely emptied or collected at all. The Municipality also conceded that garbage can not be collected from all points everyday. In addition, as the volume of garbage increases the present equipment may become insufficient to handle the volume.

2) **The present landfill is filled to capacity**

The present landfill at Ban Huay Lor is expected to be filled to capacity within this year. Another landfill has

Figure 2 Core Problem and Effects



³ Project Cycle Management (PCM): Management Tool for Development Assistance p. 17

been dug next to the present site, and the Municipality hopes to get another two years of life out of it.

3) The proposed disposal site has an expected life of only thirteen years

The proposed landfill in Tambon Kluay Pae has an expected life of only thirteen years, given present garbage production rates and population growth estimates. The Municipality hopes to be able to extend that life to twenty years provided that the volume disposed can be reduced.

4) Environmental problems exist

The existence of a landfill will always pose environmental problems; however, with a larger volume being disposed, these problems are exacerbated. Such problems include depleting environmental quality, air pollution, and the cleanliness of the city. In addition, the composition of garbage has an effect on the environmental impact of the landfill.

5) Garbage management expenses are high

The expenses for garbage management to the Municipality are mainly in collection costs, not to forget disposal costs and administrative costs. If the volume of garbage to be collected were less, then the remuneration to the GBC Group would also be less. In addition, if a disposal site has a short life, then the Municipality's return on its investment will be low and it must be prepared to invest in a new site.

3-3-3 Direct Causes

The following are the direct causes of the core problem.

1) Most communities do not sort garbage (see Figure 3)

We found that this is related to the awareness and the behavior of the people, their motivation to sort, and the program conducted by the Municipality. According to our survey, only thirty-three of seventy-six households could say that there was guidance or a campaign conducted by the Municipality or community. At the time of our data collection, the Municipality told us of a Municipality wide campaign to be conducted in the next few months. In addition, many households commented that sorting garbage is inconvenient; it requires both an effort on the part of the household and a financial cost that deters participation. Households also feel it is not their responsibility to sort; they feel that they pay taxes and a waste collection fee, therefore sorting is the Municipality's responsibility. In addition, communities do not have a central sorting activity similar to that of the UNDP communities. Many households commented that there are still insufficient garbage facilities (containers, boxes, and garbage bins). Naturally, we understand that the Municipality budget is limited for supplying equipment, and the low collection rate of the waste collection fee does not improve this situation.

Figure 3 Direct Cause 1

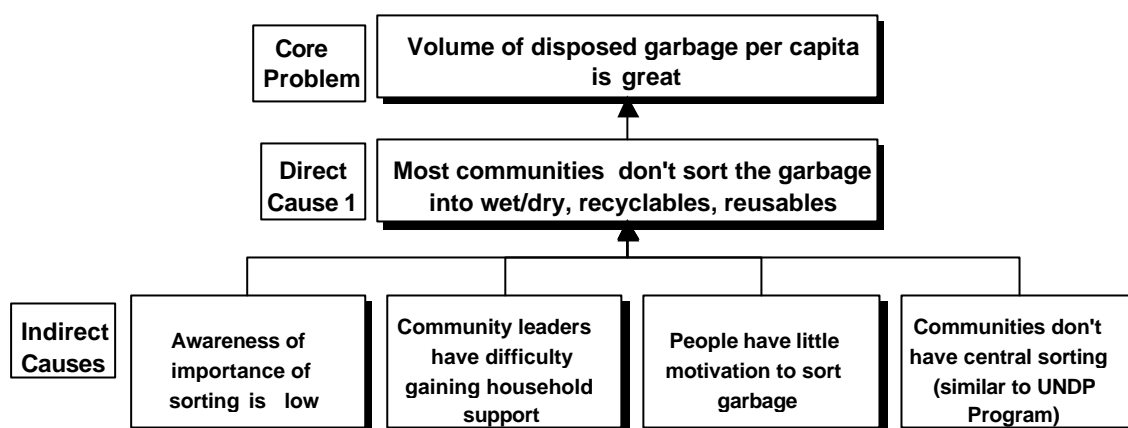
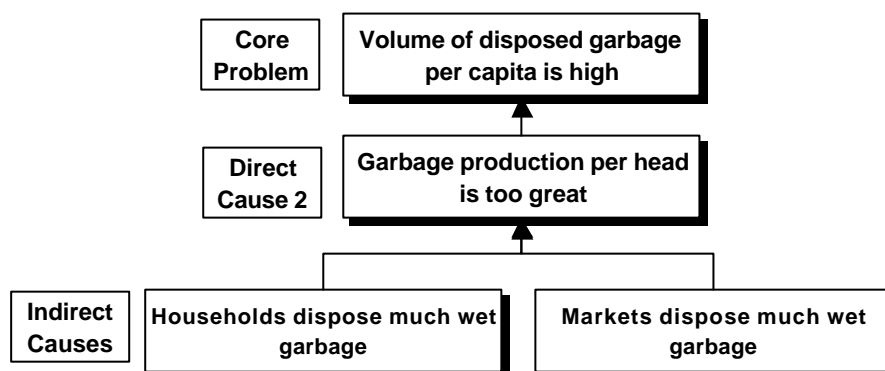


Figure 4 Direct Cause 2



2) *Garbage production per head is too great* (see Figure 4)

The most production of garbage comes from markets and households, with very little coming from industry. Based on statistics in the Municipality's feasibility study for the new disposal site, 48.8% of garbage from markets is wet garbage, and 50.4% from households is wet garbage. All of the wet garbage ends up in the landfill. In addition, two community headmen told us that households are not aware of the benefits of recycling and reusing. Therefore, all garbage is disposed, leading to high garbage production.

3) *Too much recyclable material is disposed into the landfill* (see Figure 5)

There are many kinds of garbage that can be reused or recycled; for example, iron, bottles, plastics, and household appliances. The previously mentioned causes lead to recyclable materials being disposed into the landfill. But Direct Cause 1 and 2 ignore the role of the informal sector. Many households admitted that they do not recycle these materials, instead disposing of them in the garbage containers because there is no one to collect the recyclables. This testimony leads us to believe that despite the existence of an informal sector, it does not operate efficiently. Another reason given for not recycling or sorting is that the containers are dispersed inconveniently throughout the community. Also, unlike the UNDP communities, most communities do not have a central sorting system because they have not benefited from the Municipality's support and guidance.

Figure 5 Direct Cause 3

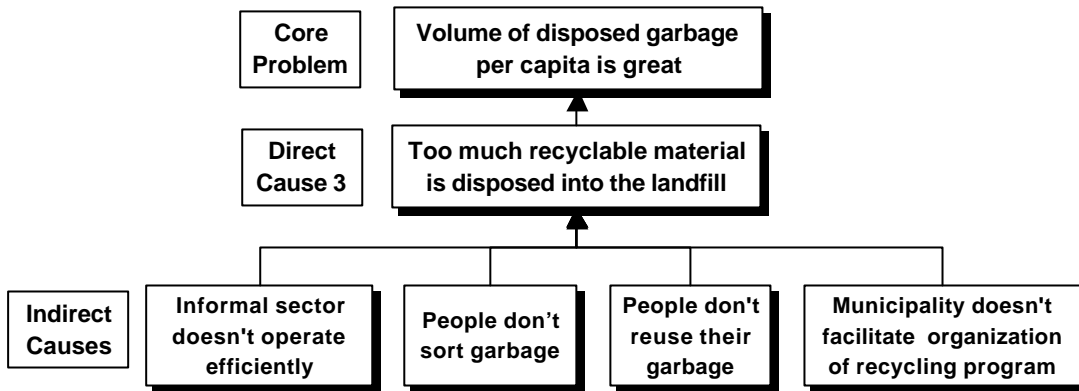
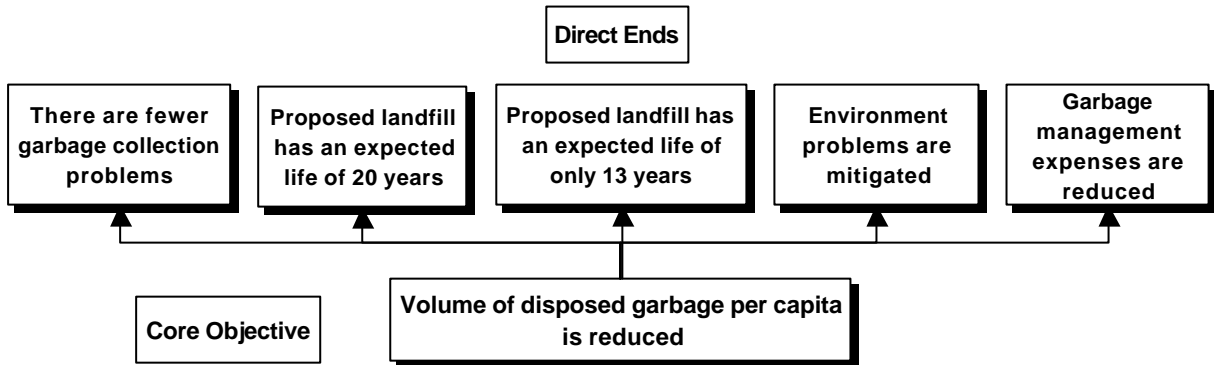


Figure 6 Core Objective and Direct Ends



3-4 Objective Analysis

3-4-1 The Core Objective

The primary goal of the project is that **the volume of garbage disposed into the landfill is reduced**. This will hereafter be referred to as the “core objective”

3-4-2 Direct Ends

The direct ends are the situations that will occur as a result of achieving the core objective. They are as follows (see Figure 6):

1) **There are fewer garbage collection problems**

When the volume of garbage disposal is reduced, the capacity of GBC and the Municipality to collect will be sufficient and resources will not be strained.

2) **The proposed disposal site will have an expected life of twenty years**

According to the Municipality’s population projection and the present garbage production per person per day, the proposed disposal site has an expected life of only thirteen years. When the amount of garbage disposed is reduced, the life of the site will be extended.

Figure 7 Direct Means 1

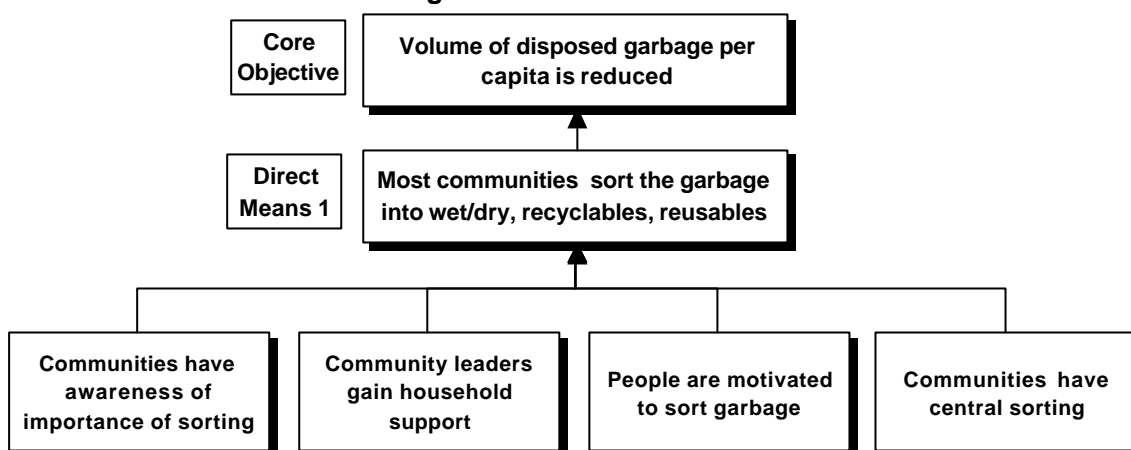
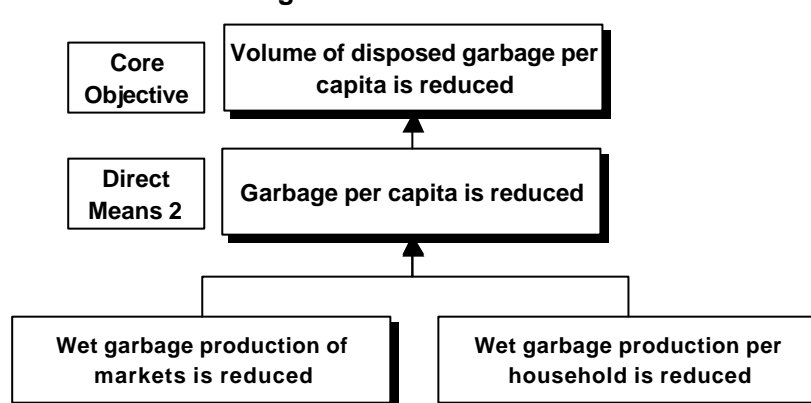


Figure 8 Direct Means 2



3) Environmental problems are mitigated

People manage their garbage better by sorting and recycling, which in turn reduces the burden on the GBC collection company. The result is that communities are cleaner and more comfortable; less garbage will be directly disposed into rivers and the surrounding nature. In addition, when the composition of disposed garbage is better managed, and the volume is reduced, the environmental impact at the disposal site will be mitigated.

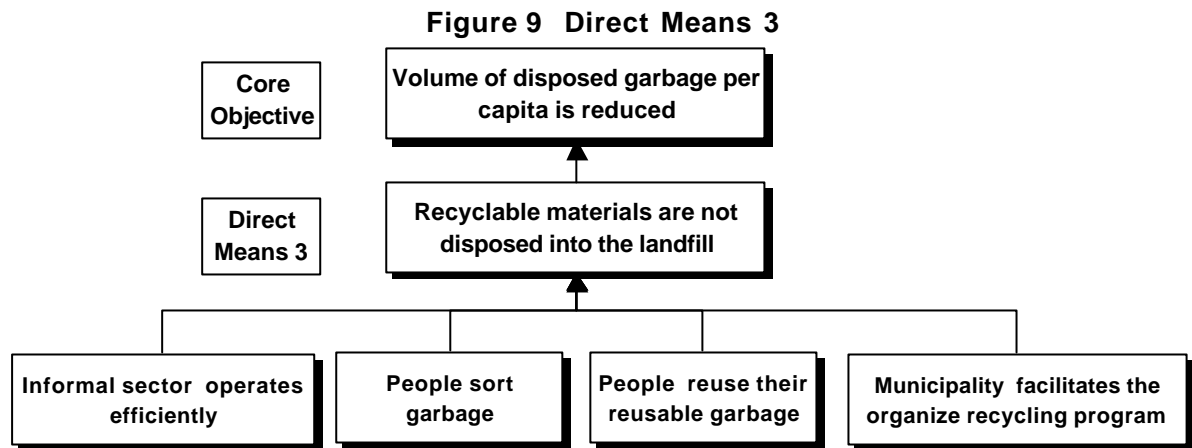
4) Garbage management expenses are reduced

When the volume of garbage is reduced, the work required of GBC to collect will not be so great; therefore, in future contracts the remuneration can be renegotiated or further responsibilities can be added, such as collection of recyclables. In addition, when the volume of disposed garbage is reduced, the need for campaigns and education will be reduced because the behavior will be ingrained and taught to the younger generation.

3-4-3 Direct Means

The direct means are the necessary situations that will lead to the core objective being true. They are as follows:

1) Communities sort garbage into wet/dry, recyclables, and reusables (see Figure 7)



We chose to refer to communities instead of households because the success of the UNDP communities is evidence that the level at which garbage is sorted is irrelevant provided that the end result is the same – garbage is sorted before it is collected and disposed by the GBC Group. In the UNDP communities, households do not sort; instead, two workers collect and sort the garbage.

2) Garbage production per capita is reduced (see Figure 8)

This means is achieved when the overall volume of garbage disposed is reduced. This reduction can be achieved by reducing the volume of recyclables, reusables, or wet garbage that is disposed.

3) Recyclable materials are not disposed into the landfill (see Figure 9)

In a sense, this mean reiterates the previous two; however, this one does not place emphasis only on households or communities efforts to separate garbage. Instead, this one includes the informal sector’s contribution to improving the present situation as well as the Municipality’s contribution to organizing a sorting program.

4. Recommended Courses of Action

4-1 Approaches

To develop recommendations for the Municipality’s garbage management, we divided our direct means into three approaches. First, “household approach”, second is “community approach”, and the third is “informal sector approach”.

4-1-1 Household Approach

1) Education

Our survey and our interviews with village headmen showed us that many people are not aware of the need for recycling. We feel it is necessary to give education to households that explains the benefits and importance of sorting. The benefits would include the proceeds from selling recyclables, the cleanliness of the neighborhood, the savings to the Municipal budget, and the environmental benefits. We also suggest that housewives be specifically targeted in the education campaign. The reason why housewives should be targeted is that they produce much garbage and are in a better position to enforce sorting in the household.

2) Campaign

Education should be reinforced by a long term campaign. The Municipality did conduct a campaign, but it was not effective. It made about 10,000 posters and brochures that were distributed to community headmen. We should mention that the Lampang municipal government has planned another campaign; however, it has not been implemented yet. Our understanding is that this time the Municipality will use the GBC Group to distribute literature to households during its waste management fee collection. In addition, we have seen the posters that will be placed around the Municipality. These steps are necessary to reinforce the education of people, but we think the campaign alone will not be effective. Education must be conducted first, followed by the campaign. So our suggestion is 1) educate the people through community meetings or newspaper announcements, 2) distribute literature to every household, and 3) make the program prominent in public places.

3) Signaling system

The municipal government should design a tag which households can display when they have recyclables for collection. The tag would be similar to a door tag used at hotels, and households would put it in a visible place outside of their house. It makes middlemen know to collect recyclables from that household and addresses one of the deterrents to sorting. Additionally, households can have an opportunity to get money by selling their recyclables. This idea is not new. It is used in many North American communities to request milk delivery and it is used at hotels to request room cleaning.

4-1-2 Community Approach

1) Convenience of containers

Households have commented that the locations of collection bins are inconvenient. We have seen that the bins are located separately for each type of garbage requiring community members to go to a few points to dispose of garbage (see Figure 10). Therefore, we suggest that the bins for each type of garbage be located together at a central location. Maybe the Japanese example could be helpful. In Japan, it seems there is a convenience store on every corner. In front of these convenience stores are a set of recycling bins for glass, plastic, and burnable garbage. Many supermarkets also have a set of recycling bins. Of course, there are not as many convenience stores in Lampang as in Nagoya, but the idea of having a set of recycle bins in a convenient, central location could be used. In addition, the Municipality should increase the number of recycle bins in the communities. In our survey, the most common reason for not sorting was a lack of containers. We realize it costs the Municipality money to increase the number of bins, but we believe it is important to make the sorting process convenient in order to have full participation.

2) Collection of recyclables for charity

We suggest involving school groups or charitable organizations in the collection of recyclables. Under such a scheme, the manpower is free because volunteers would collect, and the proceeds would be contributed to a worthy group. Many Japanese and American schools use this activity to raise funds for school trips or other activities. In addition, it could be combined with the school's education program to promote recycling among school children. The Municipality could play a role in offering guidance or equipment for the collection.



Figure 10 Municipality's collection bins used in communities

3) Composting

We recommend expanding the compost activity. Some communities could start at very basic levels. The experience in the UNDP community has shown that composting could be a self-sustaining business. We believe that after the initial investment, composting would be a self-sustaining means of reducing the volume of wet garbage disposed into the landfill; however, we think the composting activity should only be done to the point that it breaks even.

4) Create incentive

The Municipality could create competition among communities to decrease garbage volume or such. This is meant to motivate households to sort. Perhaps the Municipality could create an incentive or prize to award each year to the good communities. In addition, the Municipality could work in cooperation with a department store or supermarket to create an incentive to return recyclables. For example, returned recyclables could be exchanged for points that, when accumulated, are exchanged for goods or discounts. An opposite approach to creating incentives to sort and recycle would be to create a disincentive not to sort. In Canada, a tax is imposed on bottles, cans, and other commonly used reusable items. This tax is 100% refundable when the reusable materials are returned to any store selling such products. Despite its slight inconvenience, it does not cost the consumer anything and it encourages recycling. We realize that this system would be difficult to implement only in the Municipality without the support of neighbouring villages and provinces or a nationwide program because it would create a black market for materials brought from outside the Municipality. However, we feel the idea of creating a disincentive not to reuse and recycle has merit given the importance of this situation.

5) More equipment

According to our research, there are some narrow roads in the communities that GBC, the garbage collection company, cannot reach to collect garbage. As a result, these areas are neglected and residents tend to dispose of garbage in rivers and the surroundings instead of taking them to collection bins (see Figure 10). We believe that these areas would benefit from a motor tricycle collection vehicle and should receive priority to receive such equipment. (see Figure 11)

4-1-3 Informal Sector Approach

1) *Collect recyclables*

We have seen that the informal sector does not reach all households. Therefore, it is up to the Municipality to address this failure and collect recyclable garbage from these areas. If the Municipality collects recyclables from these neighbourhoods, less will be disposed into the landfill. The Municipality did hint that when the new disposal site is operational, they plan to have GBC collect recyclables as well as regular garbage throughout the Municipality.

2) *Organize informal sector*

The Municipality could facilitate the organization of the informal sector. The role of the informal sector is important in order to collect recyclable goods. Therefore, the Municipality should support the informal sector yet allow it to remain informal. An example from Indonesia shows how this could be successful. As a facilitator, the municipal government took the following action:

- They set up a cooperative to organize the informal sector and to address information failures; the cooperative gave the informal sector a collective voice in relations with government and offered protections and a means to share information
- They offered micro-credit to members to invest in equipment

Of course, the effort required to establish these institutions is quite great; therefore, this recommendation should be treated only as an alternative to the Municipality's collection of recyclables. We believe the best alternative is for the Municipality to take on the collection of recyclables even though the informal sector could be affected negatively by such action.

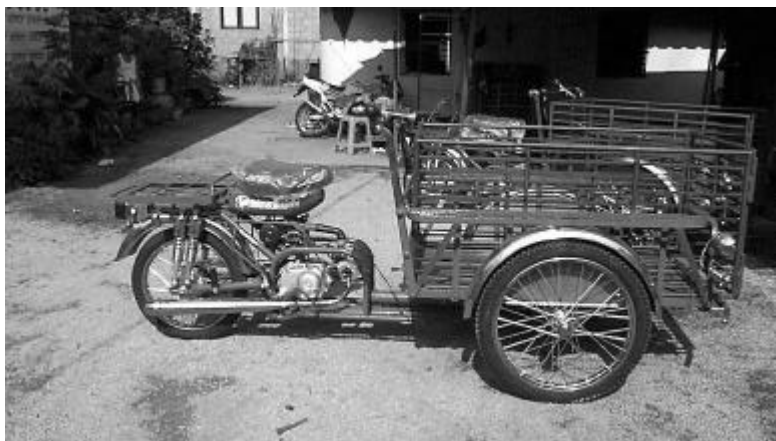


Figure 11 The motor-tricycles used in UNDP communities for collection

5. Conclusion

The purpose of our investigation is to analyze the present policy and situation concerning garbage management in the Municipality by using the PCM method. We then developed recommendations for future policy. In order to achieve our purpose, we visited many of the participants involved in the Municipality's garbage management. Their contributions and comments were invaluable to our work.

The results of our investigation are reflected in the recommendation. Our recommendations are actions that

should be initiated by the Municipality. To improve the present garbage management situation, the habits of each households is an essential factor. What the Municipality can do for them is only to offer support, education through campaigns, and guidelines. We recognize that how the Municipality conducts its education campaign better is one of the challenges in the future.

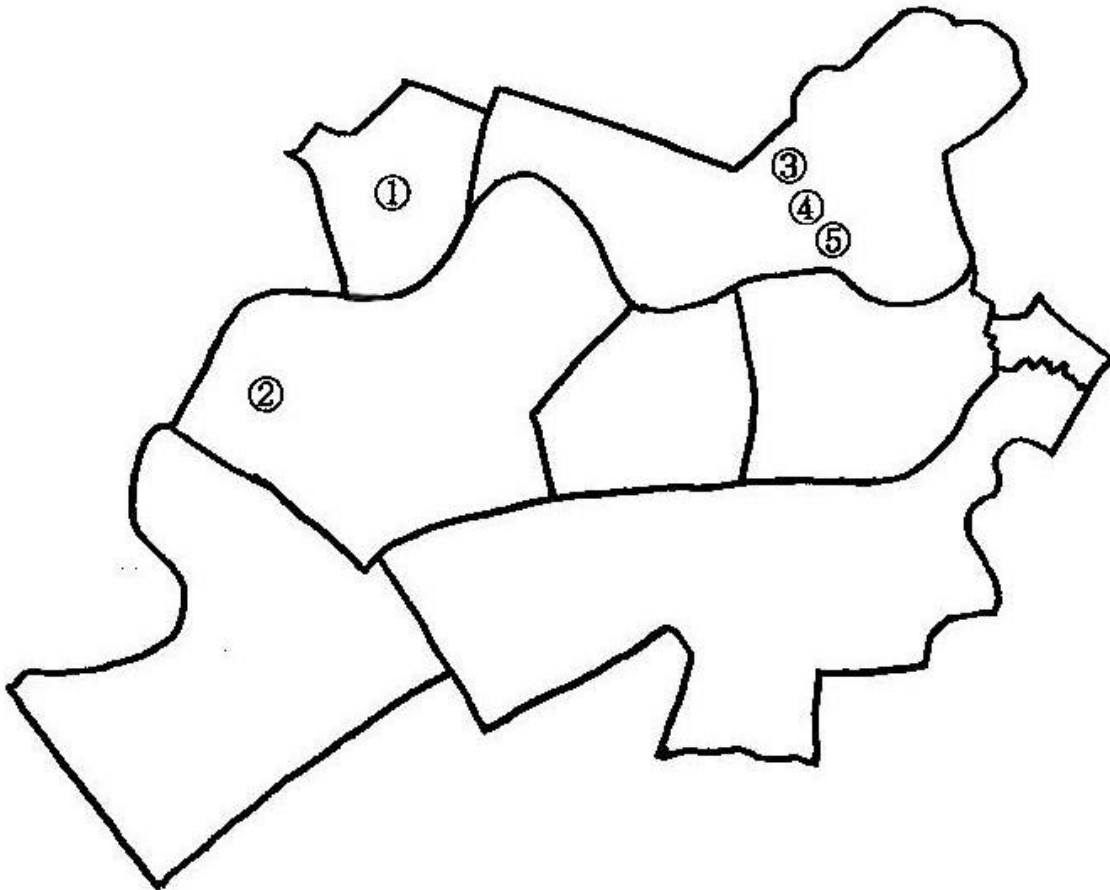
Acknowledgements

We could not have achieved our purpose of investigation without the cooperation of the community leaders, the Municipal officials, and the households who responded to our survey. In addition, we must especially thank Ms. Suhpab Saiyawongse, officer in charge of sanitation, and Deputy-Mayor Dr. Veera Loryont M.D. of Lampang Municipality. We also owe our thanks to Associate Professor Kanongnij Sribuaim, who provided invaluable assistance throughout the OFW. And lastly, we are grateful to the excellent work that the students of Chulalongkorn University did to make our presentation so successful. Our thanks go out to: Veerapong Laosirichon, Suphachol Suphachalasai, Sarut Wittayarungreungsri, Nirun Ngamwiriyaasuk, Suthipong Tungsajapot, Mongkol Poonlapmongkol, and Kamol Cheunsukkasemkul.

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APPENDIX I: Map of Lampang Municipality, indicating *tambon* borders and communities visited by WG1



Ban Dong Mon Kra Ting (UNDP)

Ban See Boon Ruang

Kam Pang Muang (UNDP)

Pra Kwae Hua Kuan

Chang Tam

APPENDIX II: The Results of Survey

Number of households

X Community*	21
Changtam	17
Suandok	20
Hongkam	18
Total	76

* Note: X community is composed of households located near the hotel where WG1 was staying. The name of the community was not noted.

Q1.Do you sort garbage?

	Always	Sometimes	No	Total
X Comm.	5	6	10	21
Changtam	1	3	13	17
Suandok	8	5	7	20
Hongkam	6	9	3	18
Total	20	23	33	76

If answered “always” or “sometimes”, go to Q2.

Q2.How do you sort garbage?

		Plastic	Glass	Metal	Paper
X Comm. 11 households	Use Mun. Containers	8	4	6	7
	Sell	1	6	0	2
	Recycle	0	0	0	0
	Reuse	0	0	0	0
Changtam 4 households	Use Mun. Containers	3	1	2	2
	Sell	0	4	1	2
	Recycle	0	0	0	0
	Reuse	0	0	0	0
Suandok 13 households	Use Mun. Containers	6	6	5	5
	Sell	4	6	1	3
	Recycle	0	0	0	0
	Reuse	0	0	0	0
Hongkam 15 households	Use Mun. Containers	5	1	4	2
	Sell	6	13	7	13
	Recycle	0	0	0	0
	Reuse	2	0	0	0

Q3. Why don't you sort garbage? (Choose all applicable answers)

	Inconvenient	Cost	No space	No container	No advantage	Others*
X Comm.	4	3	3	5	1	7
Changtam	7	2	0	10	6	6
Suandok	2	2	2	0	0	4
Hongkam	1	0	0	2	1	1
Total	14	7	5	17	8	18

*Their garbage is not able to be recycled.

*If they sort garbage, they need more plastic bag for that garbage.

*What they are required is to throw away garbage, after that middle-men sort it.

*No one is there to buy the recyclable.

Q4. Do you have any campaign for sorting garbage in your community?

	Yes	No	Never heard	Total
X Comm.	2	12	6	20
Changtam	14	0	3	17
Suandok	5	13	2	20
Hongkam	12	3	3	18
Total	33	28	14	75

Q5. Comments (numbers in brackets indicate the frequency)

1. Sorting garbage is good activities because it's convenient to collect and some materials can be recycled.
2. Almost of the garbage is vegetables and wet garbage (2)
3. Some households throw away their garbage out of the container.
4. Other people don't sort the garbage, so why do I have to sort it?
5. Throw away the garbage in front of their house and burn it in the evening.
6. Transportation fee is higher than the money which they can get by selling the recycled materials.
7. People should put their garbage into plastic bag before they bring it to the containers.
8. No complain with the municipality (2)
9. Garbage are seldom collected and monitoring are never done from municipality.
10. People from municipality do only sweeping road but they don't collect garbage.
11. The municipality doesn't collect the branches and leaves.
12. More containers are needed (20)
13. More campaign by municipality is needed (2)
14. Some households do not pay the fee but they throw away their garbage in the container. So the municipality should collect the fee from the households (2)
15. Now the Municipality sells the plastic bags for the garbage sorting, but nobody wants to buy it. So the Municipality should give it to the households (2)

APPENDIX III: About the UNDP communities in Lampang Municipality

Of the twenty-nine communities that make up the Municipality, three of them were the subject of a UNDP project. The development project had two parts: first, garbage management; and second, public electricity. Each

community received 300,000 baht for each project. The UNDP projects were completed at the end of 1997, but communities must still make annual reports to the UNDP on the use of funds and the developments in the community.

The activities taken by each community differed; however, there are some similarities⁴. The UNDP funds were used to purchase equipment needed to facilitate the collection and sorting of garbage. This equipment included motor-tricycles, disposal bins, in addition to supplies such as gloves, shovels, and other small goods. The funds were also necessary to start the programs, with the intention of short-term assistance until they could be self-sufficient. The activities necessary to start the program included training/meetings for workers and community leaders and a campaign to develop awareness of and support for the program.

We visited two of the three UNDP communities.

Ban Dong Mon Kra Ting is one of the UNDP communities. It has 421 households and they had been collecting and sorting the garbage before the UNDP project began. However, the headman did concede that the assistance of the UNDP project improved the collection system considerably. In this community, most residents pay the garbage collection fee. Presently, the fee is 15 baht per month; however, the fee will be raised to 20 baht when the UNDP funds, which still support the program, run out. Unlike other communities, the UNDP communities retain 100% of the fee to sustain the project; they do not have to remit any portion to the Municipality. They can collect a monthly revenue of 5000 baht from households and 800 baht from recycling proceeds. The community employs two people to collect and sort garbage; each earns 3000 baht/month. This community still uses UNDP funds to subsidize the collection and sorting workers' pay.

Kam Pang Muang is another UNDP community that we visited. It is about half the size of Ban Dong Mon Kra Ting, consisting of just over 200 households. Unlike Ban Dong Mon Kra Ting, it collects 20 baht per household per month, 10% of which is remitted to the Municipality. The project is fully self-sustaining; the community no longer uses remaining UNDP funds. Two people are employed to collect and sort garbage and recyclable materials: one of the workers is full time and earns 3500 baht per month, the other is part time and earns 50 baht per day. This community also presents a self-sustainable program: it creates fertilizer by composting its wet garbage. The composting activities have been conducted for only three months, but the vice-headman commented that they can already see a noticeable decline in the volume of disposed garbage. In addition, he seemed very optimistic that it could be much larger and more profitable than it is at present.

⁴ We received figures of the cost of each activity, but because of inconsistencies, we questioned the reliability of these figures and chose not to site them in this report.

Working Group 2
**Poverty Solving Projects
by Housewives Groups**

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1. Introduction

1.1. General Project Information

Ban Thung Marn Nua village is located in Tambon Ban Pow, Muang Distric, Lampang Province, 13 km from Lampang city. From a distance Thung Marn Nua looks similar to rural villages in Japan. Hardy rice paddies surrounding the village showed the fulfillment of an extensively developed irrigation system and good maintenance. Power lines followed the narrow road leading us into the village. Passing the golden temple walls there was a sense of peacefulness. Yet once among the cluster of homes we could appreciate the hard realities of the lives of the people in the village. There seemed to be a sharp difference between the construction and sanitation facilities among neighboring homes. But the people that we met were all full of smiles and amusement. During our first week of field study we saw few people actually in the village other than the women we were there to interview. Most men commute to work in nearby Lampang and the children were in school.



The Street-Scape of the Village

The September 1999 village health center records for this quite farming village indicate that the population of the village is 821 people. However, the population record-keeping system for the village appears undeveloped since the village leaders and regional officials figures were contradicting and eventually we were referred to a Bangkok government agency for more accurate village population records.

Because the village is remote and mainly a farming village the population growth has been slow, this is apparently due to urban migration to cities as far away as Bangkok to seek employment opportunities with better pay. But the economic crisis (1997-98) brought these displaced people back to their hometowns. The villagers claim that these returnees are likely to stay because unlike the big cities, the village is clean and offers a better quality of living. However, the population numbers prove otherwise, showing a decline in population from 1996.

The demographic breakdown of the village shows a fairly good balance between the ages of 5 to 55. The largest age grouping is between 35 and 45, prime-working age; and although the statistics supplied to us showed the average household size being 4.4³ most likely based on the 0-5 ages this is on a slight downward trend.

Beginning in 1990, the government introduced incentive programs toward encouraging individuals and communities to start up new income generating business ventures. During our two weeks of field research we attempted to learn what direct and indirect motivators and supporters stimulated the women of the Thung Marn Nua village to start-up their occupational group. Moreover, we wanted to inquire into the impact of the industries on individual lives, community livelihood, and its effect on relieving poverty. Finally, in our concern for the sustainability of the industries, we looked into the financial options available

Table 1-1 Population Estimates

	1980	1990	1996	1999
Thailand	46.8 million		60.2 million	63 million
Lampang			804,062 k (0.062% increase)	806,000 k (0.124% increase)
Thung Marn Nua	623	849	908	821 (9/99)

and asked group leaders to appraise financial situation. All of which included discussions on; production systems, productivity; pricing, profit, competitiveness and marketing.

The first groups to establish were the Ceramic Production and Woolen Doll Making groups in 1992. The Clothes Production group followed in 1994 two years later the leader of the Artificial Flower Making group registered with the CDD, in 1996. Encouraged by the village’s economic efforts, the local CDD introduced the relatively new program, the Savings for Production Group (SPG) in 1996. In that same year a Child-Care Center

was established to help the women with young children that tagged a long to work everyday. A year later, the leader of the ceramics group diversified her business with the production of local desserts in 1997.

The local accumulation of events that lead up to the organization of each local occupational group was not all coincidence, there were shared reasons for the leaders to establish the groups, such as:

1. The Village Headsman encouraged individual women to start up occupational groups,
2. Local bank loans became available to women for business start-ups,
3. Changing family responsibilities,
4. Entrepreneur confidence after significant experience working in businesses outside of the village.

Figure 1-1 Demographic Breakdown by Age in Village¹⁷

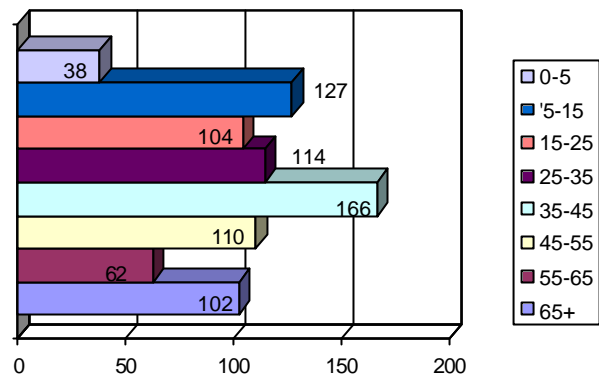
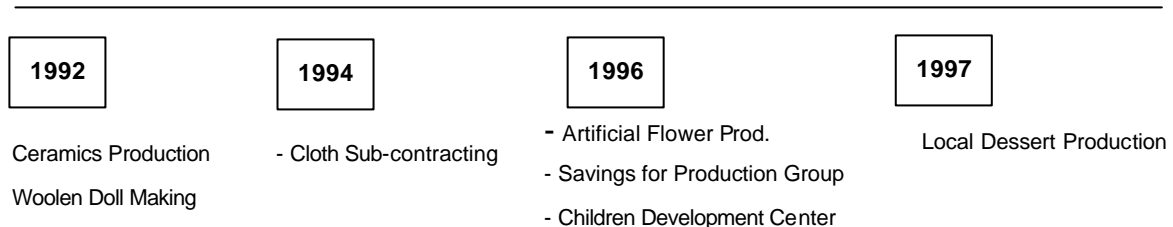


Figure 1-2 1990 Thung Maru Nua Women’s Production Group Time Line



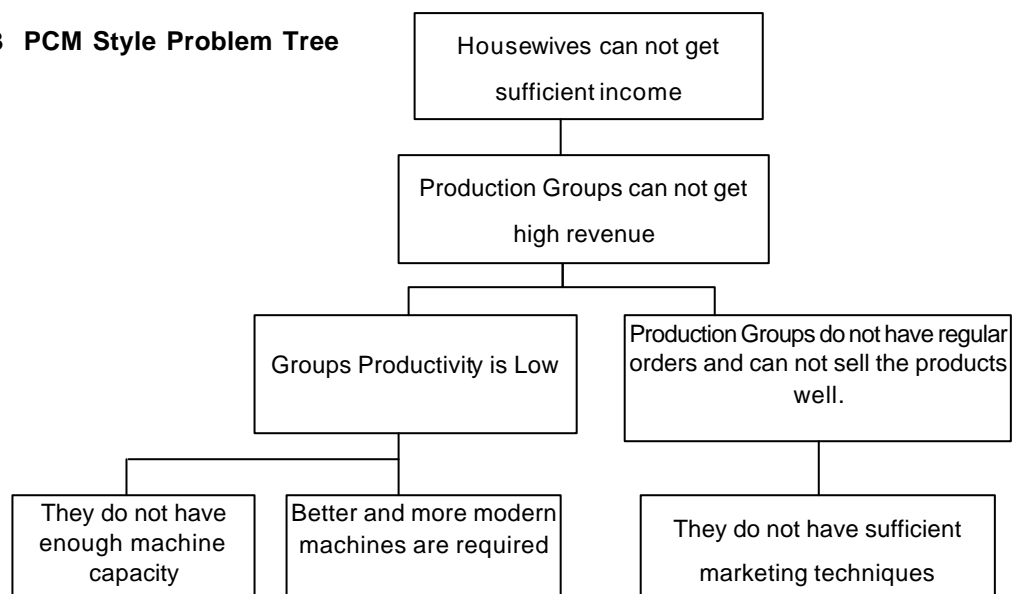
Currently, 109 housewives are participating in the occupational groups. Some of them actually come from neighboring villages. 61 women work flexible full-time and 48 of them are part-time employees. The employment is considered “flexible” because although they come to work regularly their hours are not strictly set. Part-time employees are called in, especially when the workload demand increase.

In this paper, we present the factors that our group pieced together to understand the complexity of rural development and poverty solving and the efforts of housewives to prevail. Then we focus on documenting what we heard, saw and include our perception of the situation from community cooperation to public private partnerships.

1.2. Pre-assumption of Core Problem

Our preassumption of the core problem faced by the housewives group, while in Nagoya, was that occupation group **“housewives can not get sufficient additional income.”** This was based on the documents and teachings provided to us by Arjarn Phaisal and Director Weera and the subsequent project cycle management (PCM) model that we conducted as a group while in Nagoya.

Figure 1- 3 PCM Style Problem Tree



Upon arrival in Thailand, government officials explained the current government policies and practices toward rural development, which further supported our assumption. In particular, we learn the details of government classification system for villages existing near the poverty line.

Until the early 1990's, Ban Thung Marn Nua was mostly low cash-generating farming village. The data presented to us by the Community Development Department (CDD) officials to show what percentage of village households currently living below the poverty line was unfortunately unverifiable and inconclusive. Although the summary of the Basic Minimum Needs (BMN) survey conducted by the CDD in 1998 concluded that out of 209 households, 149 were assessed as generally meeting the BMN indicators and 60 households as generally needing improvement. This represents a 71.3% living above the poverty line. However if this were the case, based on the historical figures (that were verified by both the CDD and the village headman), a dramatic improvement in the standard of living has occurred.

The governor of Lampang province tried to explain to us the process of government policy planning for rural development. It begins with the following objective evaluations, which are conducted by the different local branches of government to assess what level category they will be classified in for the next one to two years.

1. Basic Minimum Needs
2. Income, employment, production figures
3. Health/hygienic statistics
4. Availability of clean drinking water
5. Education/culture

Table 1-2 Employment Figures

Cottage Industries	Flexible Full-time Employees	Flexible Part-time Employees
Ceramic group	20	20
Woolen Doll	10	25
Cloth Making	20	-
Artificial Paper Flowers	3	3
Dessert Making	8	
Potential Total	61	48

Data collected during group leader interviews

6.Natural resources/environment

The villages are then divided into three levels and different development planning and policies strategies are administered appropriately.

- Level 1 (red) Overall consumption is less than production, leaving a majority of the population living below the poverty line.
- Level 2 (yellow) Overall consumption is equal to production, leaving most people breaking even, existing on the poverty line.
- Level 3 (green) Overall consumption is greater than production, leaving the average people living above the poverty line.

The red level, basic needs are not considered to be satisfied development emphasis is put on raising production toward the level of consumption. At the yellow level, government sponsored activities focus on a combination of production and marketing. Marketing and business management training programs are conducted for villages assessed to be level three, or green. In Thung Marn Nau village, their overall assessment score averaged a relatively high score, “green”, but their economic situation ranked only level two. Meaning that on average most people in the village are surviving at the breaking even point. They have very limited resources and savings.

To verify this we conducted our own rudimentary income survey and collected various statistical data on poverty line in Thailand.

Again, we found that both in rural Lampang and Thung Marn Nua village the average annual incomes are below the government-established poverty line. To what extent do the people go hungry, have no clothes on their backs, or sufficient lodging? This question haunts governments around the world. In Thailand 13% or 7.9 million people (1998) were considered to be living below the “poverty line”. Many governments may be resolve that can not completely eradicating poverty, still development efforts are aimed at helping people to improve their economic situation, since life below the poverty line itself often becomes a poverty trap.

Extreme wealth and prosperity exist side-by-side in Thailand. Unfortunately, the effects of Thailand’s amazing GDP growth have been unevenly distributed. The northern regions although rich in resources have somehow been pushed further into poverty. The government’s new strategy is to decentralize management of poverty alleviation. The assumption is that rural people better understand their own living situation and needs therefore they are better able to manage their own economic development. In return the government offers training and support toward job promotion activities.

In order to provide “remedies for the suffering and nourishment for the needy,” the Ministry of Interior has set up economic strategies for self-reliance to support development, reduce expenses and increase incomes. The Ministry of Interior has specified the guidelines to support occupational group development for example:

Table 1- 3 Thang Marn Nua Village Poverty Line Statistics

	Living Below the Poverty Line	Living Above the Poverty Line
1989	90%	10%
1995	80%	20%
1998	72%	28%

Source: 3, 4 (confirmed by CDD and Village Headsman)

Table 1- 4 Thailand Poverty Line in Baht

Per Capita	Rural	Urban
1986	3,823/yr	5,834/yr
1995	5,712/yr	9,120/yr
1998	20,000	20,000

Source: ³ (1986) ⁸ (1995)

- Improve the quality of products to the standard required by law.
- Promote sub-contracting in production, marketing and packaging.
- Set up an occupational group society and network.
- Establish funds for promoting and developing the occupation.
- Co-ordinate with other institutes and private agencies as multi-sectorial parties for occupational development training.
- Support marketing by setting up a community economic promotion center.
- Develop production design and technology with efficient and economical packaging.

(Source 3,16)

Understandably, when we visited the village occupational groups we expected to learn about various public private partnership activities. The governor himself spoke to us about the importance of occupational groups in rural development as “**very influential and essential!**” He further stated that the collaboration of households, temples and schools are indispensable for rural development. And it is the government agencies responsibility to give support through training, financing and developing information-sharing networks.

Table 1- 5 % Below the Poverty Line

	Real GDP growth rate	Living below the poverty line
1988 – Thailand	10.6%	25%
Northern		21%
Northeast		42%
1996 – Thailand	8.6%	11.4%
Northern		(6.8 million)
Northeast		
1998 – Thailand	6.8%	13%
Northern		(7.9 million)
Northeast		

Source: ¹ (\$1.00 = 38.00 Baht)

2. Research into the Supporting Institutions

To see what policies and programs may have been influential in the startup and support of the housewives occupational group, we wished to talk to both governmental and non-governmental actors. It was interesting thus, to learn that the housewife groups were not working with or connected to any NGO's. Although, some of the group leaders had gone to an NGO in Chaing Mai for a marketing seminar and to see if they could sell their products in the NGO's regional craft shop, no long-term relationship was formed. In fact, we were unable to detect much collaboration or networking attempts with occupational groups from other villages, none the less their own.

Table 1-6 Income Disparity – Widening Gap

	Average/Annual Baht (per person)	Year
Thailand	67,500	1995
Lampang Urban	40,723	1998
Lampang Rural	10,000	1998
Ban Thung Marn Nua (OFW Site)	19,351	1998

Source: ³ (1998), ⁸ (1995)

Any outside financial or training support appears to have come through the coordination of the CDD or TAO. Social support has been encouraged through the village council, the village temple, the women themselves (in particularly the leadership of Mrs. Boothin Boonthawee) and their families.

2.1. Government Policies

2.1.1. Community Development Department (CDD)

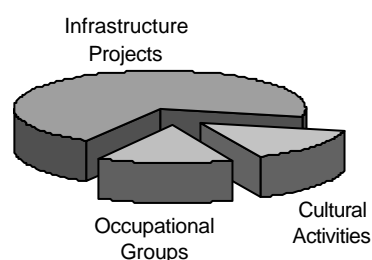
The Lampang CDD office coordinates community development activities across 5 regions. They are charged with providing information and training to help people on an individual basis and village administrators to develop the skills and awareness, which are needed to improve their own economic and social situations. The CDD plays a major role in coordinating the support of occupational groups. CDD officers who escorted us to the village housewives groups, spoke of his role as a type of liaison among the local women, local government, and the regional government. It was a CDD representative who has assisted each occupational group with the appropriate paperwork to register and qualify for available tax benefits.

Then in 1995, it was the CDD who introduced the concept of the Savings for Production Group and coordinated its conception in Thung Marn Nua. In this program, the officers are to work with poor villages to establish programs that will encourage and strengthen self-help and financing. Officers are responsible for conducting regular meetings with the groups and evaluating their success. Unfortunately, the SPG had recently folded in the village and since the CDD officer for the village had only been with this village for 3 months we are hesitant to judge the capability of previous CDD officers. But we were struck by the attitude that “programs like this work in theory but not in practice.” Thus we recognize that “in the real world” not all officers will have the same level of commitment to continuous improvement of programs. Although we did not see the monthly program evaluations, we suspect that had they been more proactive the CDD would have made prior efforts to improve the village SPG. In particular, because of the national CDD office pledge to establish SPG’s in all villages by January 2000 in honor of the King’s birthday celebration.

2.1.2. Village Administration

In Thailand’s new 1997 Constitution, the central government launched a new policy is that to decentralize government administration. However, this has put the whole country in a state of diametrical transformation, as administrators transfer top down authority and power over regional and rural areas into the hands of the local governments. Self-governance, self-determination, and local empowerment may all sound ideal, but for the local village headsman/women this may prove to be too great a paradigm change to readily understand. It was our impression after speaking with the village headsman that these new responsibilities are likely to be more challenging. Requiring the village leaders to develop short and long-term economic plans, and establish different information networks to link them to financial opportunities, such as government and non government grants.

We wanted to know what kind of direction he had provided in determining the type of business for the women to establish and if he had any goals or plans for occupational groups. We expected his plans to include such things as expansion of the occupational groups into possible higher income-generating industries. However, as maybe expected the village headman, who also has a full-time job in Lampang, appeared somewhat laissez-faire in his dealings with the villages industries. During his 10 years as village headsman he directly encouraged the artificial flower and clothes making group leaders to start their business, he has been supportive of the CDD and TAO training and he has allocated monies from the village (tax money) budget



explicitly for the housewives groups.

According to the village headman, in the 1999 village budget given to the TAO, 70% of the money was budgeted for infrastructure development (rain ditches, roads), 15% toward children's programs, sports, and cultural activity; and 15% went to the housewives groups. Village administration supports housewives production in term of money. This budget allowance is given to the "Women Development Committee" and then the money is distributed from this committee. For example, *Mrs. Boothin Boonthawee*, the leader of Ceramic Production Group has got 5000 baht in that way.

2.1.3. Miyazawa Fund

Beside national and local money, the government of Thailand has also been able to obtain various foreign funds through the IMF, WB, ADB and other international institutions. The government of Japan in 1998 provided one such funding source, known as the Miyazawa Plan. The total grant amount received was 53,000 million baht (about 160,000 million yen) in the form of a one-year soft loan. The Ministry of Finance (MOF) disbursed the money through many development sectors, stressing that the money be used in poverty alleviation programs. Most of the money has been administered through local CDD offices. Although every TAO (Tambon Administration Organization) in Thailand was eligible to receive a one-time loan of 120,000 baht, the villages had to apply for the money based on a project or need.

The Thung Marn Nua village is one of 10 villages under TAO of Tambon Ban Pow, in Muang District. Each village within this TAO was eligible for 12,000 baht. The money has been used for several projects, such as a health care center, sanitation improvements, and infrastructure building. We were told that most of the Miyazawa money went into training and loans for the occupational groups.

In some cases, the CDD had the authority to allocate special funds for special projects. Such as special fund amounting to 100,000 baht was awarded to the Thung Marn Nua village, half was given to the Rice Cake Dessert making group to purchase an oven. The allocation process of Miyazawa fund monies illustrates the changing role of the village headman. In his newly elevated responsibilities he/she must now become heavily involved in applying for and acquiring project funds and loans from regional and central government. Their new responsibilities may also make them more accountable to specifically economic activities of their village.

2.1.4. Saving Bank

Saving bank is a government bank that has recently been active in promoting rural employment and income generating activities. It also provides financial supports in terms of loan at the interest rate of 7 percent per year, which is lower than that of the commercial banks. The government uses this bank in distributing funds for social investment projects like the Miyazawa Plan. Among housewives production groups, the cloths making group and the woolen doll group have both acquired loans from the bank to help finance different aspects of their business. Although the low interest loans are widely available through the savings bank, we were told that the complicated application process alone kept people from applying. The group leaders are also reluctant to apply for more bank loans, because of the burden of paying them back with interest, consequently the loan program by women is greatly under-utilized.

2.2. Social Organizations in the Village

2.2.1. Saving Group for Production (SGP)

The idea of SGP comes from the Grameen community lending banks started in Bangladesh. In 1995, the *Muang Lampang* CDD office began introducing and forming a Saving Group for Production (SGP) in *Thung Marn Nua* village. The objective of the SGP is to empower local people involved in production activities. According to CDD guideline, people who want to be members must first pay a stock fee and monthly put money into the group based on individual contract. And SGP

deposits in the Saving Bank, and then SGP gets 3% interest from there. At the end of each year, dividends (11%) are distributed to each member. Besides, if a member needed money for their production investment (this should be the main purpose) or emergency, they can borrow money with 2% interest from SGP.

The members are usually farmers or working people in cottage industry, store keepers and so on. In this village, there were about 40-50 members and ironically, they were all women. Unfortunately, many of the members could not stick to their contracts requiring regular savings deposits. In addition, over half of those who borrowed money did not pay back their money as scheduled. It seems that the members did not follow or understand how to implement the original guidelines presented by the CDD. The records that we observed showed over 80% of the members had taken out loans for non-profit generating "emergency" purpose like food consumption, or clothing. Although, such loose and inefficient practices contributed to the failure of the program, we can't help but wonder how the village would have fared with out this "emergency" money through the economic crisis of 1997 - 1998.

2.2.2. Child Developing Center

Healthy and stable childcare services are critical to the mobilization of rural women into the workforce. As stated earlier, in 1996, to support her own workers the leader of the ceramics occupational group helped to start a Day Care Center located in *Thung Marn Nua* village. The center takes care of pre-school children ages 2 1/2 – 4 during the day for a low cost of 100 baht (300 yen) a month giving women the opportunity to work outside home. Of the 31 children only 5 come from another village and all come from economically disadvantaged homes. Most of the children's mothers work in the village occupational groups.

In relation to our project we stress the role that the Childcare plays in supporting parents to secure income but in reality we found that it is the children who are benefiting the most. The children sing, play, eat, and nap with other children their age in a good environment. They are taught very important interaction and socialization skills. The childcare provider stresses independence and education readiness in the daily activities through learning songs, poems and personal independence. As a result, children have a jump start on learning through being more comfortable with the school environment when entering kindergarten and their parents have the freedom to choose to work in or outside of the home.

2.2.3. Village Buddhist Temple – The Center of our Heart

Established in 1734 (2277 BE) the village temple grounds are still the main gathering place for the young and old in the village. It was the village headman who steered us to the temple when described the temple as the heart of the village and told us of the support that the abbot has offered to the housewives occupational groups.

Greeting us with a smile and a bow abbot, welcomed us into his home. Here we got to see and experience Thai Buddhism. Females were explained that in the Thai culture they must not touch the priest, or he would be forced to step down from his monkship. But the kind young abbot was unassuming and explained that we should not worry with formalities in how we spoke to him. However, careful to sit below him in respect we perused our questions into his support of the women's occupational group activities in the village. Humble in his response, he was somewhat apologetic for not being more involved in encouraging the housewives groups. Most likely as a young priest one would say he is still preparing or learning his place in the community. He informed us that it is not uncommon in Thailand for abbots to become activists in community development and poverty alleviation. However, for now, he is spending much of his time with the youth. One example is the recently formed an educational scholarship program for kids, which he has funded using the villager donations to the temple.

His relationship to our project research might seem relatively indirect. But in any community the religious teachings and informal private conversations of the abbot have been overwhelmingly in support of the women working together within the village. He is of course a central contributor to the social and spiritual health of the village community. He plays a role in encouraging the housewives by praising their efforts toward improving the quality of life in each household. He also

emphasizes the equality of gender as the supporter of the religion. Therefore he reinforces to husbands that women's labors are good for men, the family and the village.

3 Focusing on Occupational Group

As we conducted field research on the Ban Thung Marn Nua village, we observed the following conditions. It is important to note that the below independent findings support previous research conducted by Chulanlongkorn University Social Research Institute (1991)¹ and the Department of Interior.⁴

3.1. Income Allocation Survey

To better understand the income situation of the households whose housewives work for production groups we conducted a simple income allocation survey. Among the respondents were the group leaders and 11 employees, however one was disqualified because unlike the others surveyed she only works part-time.

Housewives Survey		
1. What is the total number of people in your family? _____		
2. Monthly Cash Income Sources		
A. Husband – Main Income	_____	Month
B. Housewife – Supplemental Income	_____	Month
C. Other	_____	Month
	Total	_____
3. Consumption Spending		
A. Cash spending on food		
<input type="checkbox"/> a day	<input type="checkbox"/> a month	
B. Clothing	_____	Month
C. Housing		
<input type="checkbox"/> Renting <input type="checkbox"/> Loan <input type="checkbox"/> No cost	_____	Month
D. Utilities		
<input type="checkbox"/> Water	_____	Month
<input type="checkbox"/> Electricity	_____	Month
<input type="checkbox"/> Gas	_____	Month
E. Transportation	_____	Month
F. Education		
<input type="checkbox"/> Day Care	_____	Month
<input type="checkbox"/> Basic Education (1-9)	_____	Month
<input type="checkbox"/> Higher Education	_____	Month
G. Health Care/ Medication	_____	Month
Insurance	_____	Month
H. Recreation	_____	Month
I. Other	_____	Month
	Total	_____
4. Personal Savings		
How much do you save per month?	_____	Month
5. Other:		
Do you feel that your family has become self-sufficient?		
Do you want additional income? Why?		

Through this format we attempted to learn how much the housewives earned, how they typically allocated their income, and their percentage contribution of income share within their households. This gave us a general picture as to whether they felt their financial situation to be sufficient or not. Predictably, although they felt that their supplemental income from the cottage industries was helping improve their standard of living, they fell far short of meeting their families needs. Our job was to try to assess the financial realities and those consequences. Except for the group leaders, most household average annual income is still below or on the government's rural annual per capita per year poverty line.

3.1.1. Findings

The findings of survey can be seen in this following table:

Annual Averages	Overall	Leaders	Workers
Contribution of housewife income to total family income	39%	45%	37%
Income/capita/year	40,647 baht	99,150 baht	17,247 baht
Income /month minus consumption = Remaining	2,578 baht	6,775 baht	900 baht

Note: See Attachments for complete Data

The table shows that on average the group leaders supply 45% of their household's income, much greater than the 37% achieved by the workers. The leaders are close to achieving equality of income contribution in the household. Household income contributions are important when looking at gender issues and empowerment but our focus is more on how the supplemental income of the women is pull households out of poverty.

We were pleasantly surprised that our rough figure for overall average income per year was 40,644 baht, higher than poverty line. However, this is misleading when considering the workers since there is quite a difference between leader families and worker family's situations. Broken down the per capita per year income the leaders claimed was 99,156 baht, while workers families subsist on only 17,244 baht. This is in part because the income situation of leaders husbands was either more favorable or in thanks to outside teaching opportunities that the leaders were able to secure. Still the workers and their families were clearly living below the poverty line. As noted earlier in the 1998 official government income survey the average annual baht for the village was 19,351 baht.

The survey did give us standardized information on life styles and spending habits. Most likely because of farming, gardening or local fruit the women managed to feed their entire families on 100 baht a day. Family members may go hungry but they do not appear to be in a crisis. The cost of living is lower within the village and their purchasing power is higher than in Lampang. For families to buy clothing and other goods and services from the markets of Lampang they often have to pay twice the price.

All respondents stated that since the occupational opportunities have opened up in the village their lives and standard of living has improved. However, they also felt that it was harder now than before to maintain or improve their current living standards. Without a more in-depth survey it would be impossible to calculate to what extent their basic food, shelter, and basic health conditions do not meet their minimal needs. Thus we did not probe deeper into the extent of their poverty but focused our remaining research on the practices and sustainability of the production groups.

3.2. The Role of Occupational Groups in Development

All indications show that the small-scale production activities of the village housewives have had a broad and decisive impact on development of the economic capacity of the village. Clearly the group leaders or owners are central to each of the achieved success and must be recognized for their initiative and commitment. The entrepreneurial spirit that the group leaders

have portrayed to establish the financing, generate resources, organize production, and acquire customers has not come without personal risk. Some of the group leaders were able to build on their own talents or previous work experience in Lampung, while others went to great expense to seek out new skills and technologies. Each management style is different based on the different personalities and objectives of each group leader. But together they provide their neighbors and near-by villagers with a new means to earn supplemental cash income locally.

We found the composition of the employees to be remarkably diverse. Young mothers needing to be close to children and home, women who had been displaced from city jobs, middle aged farming women with little education and or work experience, and college students home on school break. For some it was their choice to work in the village, for others this was their only option outside of farming or scavenging in the woods for items they could sell. These workers could not afford their own car or transportation to the city or another village even if they could find jobs for the unskilled.

By all standards the location to home and flexible work hours are the biggest benefits these production groups offer to their employees. The group leaders appear to give very flexible scheduling freedom, allowing employees to choose their own hours within a 6-day workweek. In the doll and clothes making groups the shop hours range anywhere between 7 a.m. to 10 p.m. Employees can also elect to bring work home to try to earn extra pay.

Although most of the production is "simple" by most standards, we would argue that the women are learning tangible and intangible transferable skills. Learning responsibilities related to going to work everyday, being trained on a task, developing relationships with co-workers, being evaluated by a group leader and receiving regular pay are all very important intangible work skills.

Whereas sewing by hand is traditional, those employees who are using industrial sewing machines have acquired skills rare to the village. The leader of the cloth-making group works to build on those techniques by teaching the women to sew adult patterns for themselves and their families. With their enhanced skills they are able to sew with speed and precision the children's garments for contract and even develop skills to sew goods to sell on their own in the markets.

The paper-flower making group leader is an artisan and a teacher. Her design sense and creativity is rare and an apparently under utilized asset by the other groups. Her work is her passion and something that she loves to share with others. She teaches apprentice like employees the art and technique. An attempt to rush to produce quantity or bring down the price should not be encouraged if it compromises the quality of the product. In fact, her market sells price might be considered too low and should increase as she searches out her market niche.

On the macro level, the national government advocates cottage industries in part because they see it as a way to discourage urban migration. A Royal Family project in nearby Lampung has been established as a model for income generating activities that mobilizes rural people and preserves the local traditions. For local government officials who have seen the weakening effects of young flight on their small village they see cottage industries as bringing new unity and livelihood to the farming community. Regardless, the village headman seemed quite sincere when he spoke of the positive changes that he has seen in the 7+ years since first occupational group began in Ban Thung Marn Nua village. "The health of the family has improved because family members are able to spend more time together. And people appear more empowered or motivated that they are able to provide their family with a higher standard of living. They take pride in their work and they take pride in their products."

However, as previously discussed, as supplemental income the salary is still low, too low to pull the employees household cash income above the poverty line. The reality is that earnings are based on the survival management tactics of the production groups. Despite the use of cheap labor, low production costs and minimal profit margin, employees' salary must still be based on sales or revenue. We whole heartedly want to applaud all of those involved in the start up phase of the five village industries. But if the goal is to secure sufficient additional income for the occupational groups then we believe that production groups will need to organize themselves to take the next step to upgrade market competitiveness and obtain regular financial security.

3.3 Marketing

We interviewed each production group to understand their marketing strategy and then conducted local market research in Lampang city to compare how their products hold up in the market place. The following are summaries of the marketing methods of the ceramic production group and the artificial flower production group, followed by our recommendations for their marketing strategies.

3.3.1 Current Marketing Strategies

Ceramic Production Group

To sell her ceramics products the leader of this group attends festivals held in various provinces around Thailand, which she follows through a festival reference book which lists dates and locations of festivals.

The majority of her sales however come from orders that she acquires from shops in Bangkok, Chainmai, and Lampang. Unfortunately, none of the orders are on contract and each has to be negotiated and contested for directly with the shop owners. Actually, Lampang ceramics are famous throughout Thailand, however, she is at a definite disadvantage because of the size of her oven which limits the size of her products. Most of her products are decorations, figures, or chimes, not utilitarian items like plates, bowls or cups which need to be replaced from time to time.

Even though the group can produce around 1,000 pieces a day, they are unable to sell at that volume. The price is determined by the size of products, between 5 - 25 bahts. Their monthly sales were about 100,000 bahts prior to the economic crisis in 1997. But since then sales have dropped to only 50,000 bahts per month. As a counter measure the group began making local rice deserts, in 1998, to supplement the decreased sales of their ceramic products. Now they fluctuate between ceramic products and local rice desert depending on their order.

Unfortunately, in our market research, the only Thung Marn Nua ceramics products we were able to find in the shops in Lampang were the small elephant as souvenirs. However hers were not the only elephants in fact, there were many almost identical elephants from different shops. The group leader regrets that her products have difficulty competing based on quality and she feels she would do better if she could afford to use higher quality clay. But for now her strategy is to set her prices lower than her competitors. We were concerned with the fact that she was trying to sell products of the exact same design as other factories but she did not see the need for a more unique product just to be able to improve on the quality; bolder colors or better clay.

Transportation is another obstacle in marketing. Bangkok offers the biggest concentrated demand for ceramics but Lampang is a good days drive from Bangkok. She and her husband some times use their car to deliver the products but by car or train there is still costs incurred with transportation. To recover the costs she increases the price of each product by 15%.

Artificial Flower Production Group

Her group usually produces 110 flowers a day and sells them for between 10-15 bahts per each product, the nicer flower arrangement can sell for between 100-200 bahts. The materials cost per each flower is between 4-5 bahts.

The group leader appears more content being creative and less concerned about flower sales volume, marketing or profit margin. Although there seem to be a great many market opportunities available with in her the Lampang area, she is happy to sell through her circle of friends and neighbors. She has developed a sells base through donating her flowers to village weddings, funerals or festivals. But her reputation has spread and she is often asked to come to neighboring villages, at which time she collects a minimal fee. This passive advertisement helps to bring in orders. She does not work with shops or hotels in Lampang to sell her products so her sales are local or to people who have learned of her talents and although she used to have a scrape book with pictures of her flower designs for people to order out of she no longer keeps the book. But again orders do not come regularly.

Her bigger sales come through her teaching contacts. At her regular artificial flower making classes teaches through the university of Lampung she teaches how to make the more artistic and elaborate artificial flowers. Her students often purchase her works and try to copy them at home, or give them as gifts. In this way she often creates her own competitors since many students have gone on or left her production group to make flowers on their own. Their products also sell for less. But as teacher with expertise, she can request higher prices for higher products.

3.3.2. Marketing Suggestions

Based on our analysis of the marketing situation among all of the village production groups, we have some outsider remarks that we hope are appropriate to help the marketing efforts of these two occupational groups. First, we recommend using the support and training of the specialist from the Lampung CDD office to jointly conduct demand research. Analyzing what kinds of products are in demand in which places should help sales and reduce inventory. This kind of analysis is necessary on an annual basis. With the demand research results the occupational groups should be able to redefine their target consumers and markets. Second, from our perspective we encourage the development of original design and diversify the designs to explore new demands. Sharp well-designed originality can lead to competitive advantage or trademark items. It is not all about low prices and production volume the quality of the materials must be considered. Naturally, one has to know their limits and if it is unrealistic to try to compete with the higher quality shops then the mid-quality range if fine as long as the quality and design are comparable. Third, the previous practice by the artificial flower group of creating a product order album was quite good and should be encouraged for all production groups.

Recognizably, the group leaders are currently wearing all of the hats of their businesses. They are the employer, the trainer, the procuring, financing, marketing, and transporting. In this manor it is hard to imagine them having much free time to conduct market research if their goal is to compete and possibly expand then applying this cycle of market expansion should help them reach their goal.

Cycle of Market Expansion - They can increase the demand and then their sales. By a theory of a scale of economy, if sales increase and they come to produce more, cost per a product, including transportation cost, will decrease and then the price will be reduced. Due to low price, the demand will be accelerated.

3.4. Unstable Financial Resources

Despite the advantage of cheap labor, cottage industries suffer from financial instability. They are burdened by the time costs involved in purchasing raw materials, low production capacity and marketing. Unfortunately, it is often their own preoccupation with the business which further isolates them from critical information on networking or loan opportunities. Profit in the industry is low.

To gain a better understanding of this we will present an account of the woolen doll and clothing production groups and their struggles to make financial ends meet. Both appear to be very committed to providing jobs and expanding their production capacity. However, the profit margin for the clothes-making group is currently out of her control since she is subject to the payment manipulation of the Bangkok Taylor contracting (verbal) agency. Using the example the woolen doll making group we can see the difficult financial realities of the occupational groups.

3.4.1. Financing Realities

The group leader of the woolen doll-making group is a conscientious business minded woman. All of her efforts are directed toward financial security of what she considers her families business. Despite the fact that she runs the only woolen doll group in the province of Lampung, she still struggles to compete in quality of design and price with cheaper production

groups from other provinces and larger manufactures. The dolls her group makes have not attracted long term stable contracts. And because she has no distributor agents and does not belong to a cooperative organization, she must travel all over the country selling her products to stores and at festivals. Her selling point is her smile and skill at developing personal relationships built on trust. But being on her own she has no bargaining power to demand higher prices or larger orders. In general her products are relatively low-priced and to remain competitive she sets the doll price at a mere 20 baht above production costs. Her secret to negotiating is that when customers push relentlessly for lower prices based on bulk orders, she compromises. Yet shrewdly makes up the difference by shrinking the size of the dolls slightly, but unnoticeably to save on material costs.

She is proud to be able to offer the highest wages in the village to her employees. Our income allocation survey supported this claim since all of the workers surveyed from the woolen doll group appear to contribute enough supplemental income to bring their household over the poverty line. In fact their earnings were remarkably as much as 1000 baht a month over the other groups (the average monthly earnings for the woolen doll group is 3300 baht).

Other than two loans that she obtained from the government Savings Bank she has used all of her own money to finance her business. As the inventory of unsold dolls piles up during the slow seasons she must still make the 3-month payments on her loans and pay regular wages to her employees.

The below equation of profit percentage is an attempt to understand in baht terms the money restrictions she experiences. However, there are too many variables missing or unclear from production costs information. Believed missing from the calculation is “m”: loan repayments, materials costs, and machine and inventory depreciations. Although the figures are rough we concluded that the profit margin is indeed low.

Average monthly Compensation Costs	Production and Materials Cost	Average Revenue	Doll Making Profit	Revenue to Profit %
33,330	67,270 (+ m)	150,000	49,400 (- m)	32.9% (- m)

Without adequate capital resources it is difficult to foresee her able to obtain her goal of investing in higher quality materials, purchasing more modern sewing machines, and employing more workers. All steps that would help to improve efficiency and the quality of the product and possibly give her leeway to work on design improvements.

At present she is disillusioned, somewhat disgruntled with village savings group for production and the bank loaning system and refuses to consider another loan from the government savings bank. In her opinion the repayment burden is too steep and unforgiving. She sees enough free money being given out and thinks she will do better to wait for a special loan programs like the Miyazawa loans which does not have to be repaid.

But villagers like the clothes-making group leader are aware that other villagers who have been successful in raising money through SGP. Other village groups in Lampang have begun using their shared equity to get good loan financing and purchase big items like sewing machines and thus expand production groups activities in their villages. The women in the all of the production groups participated in the village SGP but the fragmentation of the occupational groups unity and objective direction contributed to the programs stagnation.

Recognizably, women can be good community organizers. But are typically, as seen in this village the ones in power. The local government and district TAO know by association where and when there is money available. But we question the communication methods and coordination with the occupational groups since to our surprise records show that there was budgeting allocated for the promotion of cottage industry on both local and TAO level yet the clothing and doll production groups received some training but no funding.

4. Conclusion

In general, the village initiative to run production groups is a remarkable progress. There is shift in villager's way thinking. From job seeking oriented to job creating oriented. Presently they already started. This is the most important point of it. The government's response is also highly appreciated. However, further steps such as guidance and facilities, should be done to strengthen, direct and supervise their willingness to run their entrepreneurship. Therefore, the following recommendations and tasks in the future are formulated to support them to reach better condition.

4.1 Feasible Recommendations

4.1.1 Occupational Groups

It was our impression that the occupational groups were not collaborating to their potential. Instead of they served to be competing with each other, protecting themselves from the prospect of other villagers turning into competitors, or not sharing talents, we recommend that the occupational groups need to start thinking of how they can support each other's production activities; encourages in the village to establish similar production groups and strengthen their information sharing system. Through establishing occupational group cooperatives, they can share the responsibilities of not only marketing and funding, but also share where possible the supply of materials, quality control, design, talents, networks, market trend (because they shall know it better). This would decrease the group's leaders burden and help them to focus on production, quality and quantity. They may have more time to develop their own designs. Establishing cooperatives may lessen dependency on other parties (suppliers, middlemen). In addition, developing cooperatives will expand and encourage new similar cottages industries to spring up. More bargaining power if there are more sewing groups.

Considering the fact that only group leaders had chance to get skill training, as a consequence they are expected to share talents and expertise such as designing skills, management skills and marketing ideas. In addition, the group leaders need to develop skills training concepts.

4.1.2. Village

We recognize that Thailand is a state in transition from centralized government to decentralized government. But during this, Village Leaders have to learn the role that they can play in the village development. Under the new system, rural government must begin to take an active role in planning and seizing opportunities for their villages. The future dynamics of the village depends on educated and resourceful leadership. Along with administrative duties, they have the new responsibilities towards economic development and they shall have a sense of ability to see what is going to be in the near future related to the villagers and especially to the occupational groups.

In relation to the establishment of cooperatives, Villages Headmen may initiate it by disseminating information to the villagers and occupational groups regarding the advantages of having cooperatives. They are also recommended to hold regular meeting and if possible maintaining network with other village headmen within the TAO.

4.1.3. Administrative Level

Although government policy to provide initiating funds for occupational groups, further guidance is still required. As an infant industry, the occupational groups need to be protected from any constraints. The Thai Government tax-free policy is highly appreciated. They also need technical and managerial supervision. So that more frequent mobile supervision and training provided by the government will be meaningful for them.

At the administrative level, the government shall develop concept of subsidiary companies by building partnership between giants companies and infant industries, including occupational groups. As an example, developing partnership model (such as cloth making group) is a good method to combat unemployment in the rural area. However, the needs to provide more

equal position in this kind of partnership shall be given higher attention.

The Government of the regional level shall also have possibility to support the occupational group in finding market, both local, national and abroad. The government shall have information regarding demands of products and they have to forward it to the occupational groups. The reason why sharing information among parties involved is required.

4.2. Goal Setting for the Future

The biggest challenge for the Production Group in the near future is how to survive in the global competition. As an infant industry, it is almost impossible for them to combat the challenge individually. The role of other parties such as the government and the financial institution is required. While the government play role in general supervision and selling information regarding the industry for marketing, the Saving Group for Production can play role in financing this industry.

4.2.1. The Saving Group for Production

Although the idea of establishing Saving Group for Production was very good, unluckily the operation was unsuccessful. The problem lies in its management system, from its personnel's capabilities, time allocating for managing it, up to the policy applied in lending fund. Considering the above, the most important thing to do is to appoint a full-time manager who has capability in handling all matters related to the business. She shall have a good sense of business and be able to find business opportunities. In addition she shall have a full dedication to the success of the business. Appointing one emphasizing this consideration will be a good beginning for the reestablishment of the 'New Saving Group for Production'.

Further step is to determine clearly the right and duties of the manager. In this phase, the manager should be given a certain degree of flexibility in using discretion in running the bank. For example, the policy on lending the sum of less than or maximum of 5000 baht should belong to the manager. While request for borrowing the sum of more than 5000 baht should be discussed in group's meeting. A proper policy and flexibility in running the bank will be attractions for one who will be appointed to be the manager. Otherwise, no one will have interest in running the bank.

Next important thing to do is to set up the policy on how the bank shall operate. The policies should be about the conditions and procedure in the operation of the bank in lending fund, such as who may have rights to borrow the fund, what is the purpose of borrowing the fund, and how much one can borrow the fund. The interest rate shall be determined based on its borrowing purpose. Borrowing fund for reinvestment may be charged higher interest rate compare to purchase of luxuries. Repayment mechanism shall also be set up previously to avoid dispute that might be appear later. Clear information on interest rate and payback period must be easily understandable by the borrowers at the time they sign the agreements. This will be a guide-lines for the manager in running the bank.

The last important thing is that regular control over SGP shall be done from the starting phase. It may be once in a month so that possible misleading can be detected as soon as possible, a possible solution may be applied immediately. After being solid, control can be done less frequently. In addition, the manager may be given flexibility in operating the business.

4.2.2. The Production Groups

Enhancement of Quality

The market research done the working group found that there is a tight competition of the similar products, especially ceramics market and traditional foods. In response to this fact, the production group should enhance its product quality. It can be done from the selection of raw material through the production process up to the final product. If it is considered necessary, the method of packaging can be taken into account. There is an assumption that the first impression of a product depends on how its performance. To reach high quality of product, the group leaders may act as the quality controller so that they will have a high standard of quality that may be able to meet the requirement of the market.

Variety of Products

Another important thing lies on its product variety. Generally, market orientation always changes all the time. This is the reason why production groups are not supposed to produce similar design all the time. Therefore, production group leaders have to be aware to these changes. To anticipate this situation, they have to be innovative. While the big companies have 'Research and Development', the production group leaders should handle these duties as well.

Strengthen Management

Managerial aspect is another crucial thing to solve. At glance, it seems to be the main focus of the production group leaders, so that they spend most of their time by calculating money, materials and other financial matters. As a consequence, the production aspect is left behind and may affect product quality. Therefore, another task in the near future is to authorize somebody else, may be one of the staffs or one within the family, to handle either production matters or managerial matters.

4.2.3. The Government

Among parties involved in the existence of the production groups, the government is the most powerful one. It is responsible for creating a suitable condition that makes possible for the production groups to grow well.

Regarding the above, among policies to be taken by the government are building partnership between big companies and infant industries. It is believed that this mutual partnership will result in maximum performance of those parties. For example, the big companies on one side shall provide supervision on product quality, management, and marketing. On the other side they may have cheaper products and also larger number of products, more than their own capacities. Here, the government should provide information concerning the advantages of partnership program. In this context, the government is supposed to issue and enact such regulation to set up mutual partnership between big companies and infant industries.

Acknowledgement

Our indebtedness and gratitude are given to many institutions, individuals who have helped given their time and expertise toward making Thung Marn Nau village our classroom in development field research. We recognize that we spent only a few days in the village and that the true authority is the women who have built their occupational industries over the last 7 years. But we would like to thank the housewife groups for openly sharing with us their stories and struggles allowing us to better understand the obstacles that women face in economic development.

We would hereby like to express our heartfelt thanks to Professor Ajarn Sananchit from Chulalongkorn University, she is a wealth of knowledge and we appreciate her spirited input and insightful comments on our research. Many thanks as well, go to Professor Phaisal Lekuthai from Chulalongkorn University for his detailed and intelligible description on Lampang province in his book; his knowledge and passion for the efforts of the people of rural Thailand and his high expectations on the research of our group were infectious. Appreciation is also due to Director Weera, of the District CDD office who kept us informed through insuring we had the appropriate CDD officers with the most information.

A special thanks goes to Weranuj Ariyasriwatana (Orr) who stayed with our group the entire time and never stopped smiling despite the pressures of translating. Thanks as well, to the other Chulalongkorn University students who came and went during or 2 weeks but whose cooperation and contributions were invaluable as interpreters and translators we hope that you benefited from the experience as much as we did.

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Attachment 1. INCOME ALLOCATION SURVEY FOR ALL RESPONDENCE

									<i>Baht</i>
All Respondent	Income/month				No. in House-hold	Income per capita	Consumption per month	I - C	
	Husband	Wife	Total	% Wife's income					
Artificial Flower Production Group									
1. Leader		33,000	46,650	70.74	3	15,550	38,572	8,078	
2. Worker -1	5,600	3,000	8,600	34.88	6	1,433	7,530	1,070	
Average	1,867	12,000	18,417	35.21	3.00	5,661	15,367	3,049	
Woolen Doll Production Group									
1. Leader	8,000	20,000	28,000	71.43	4	7,000	18,010	9,990	
2. Worker -1	5,000	3,000	8,000	37.50	4	2,000	4,482	3,518	
3. Worker -2	3,500	4,000	7,500	53.33	4	1,875	7,962	-462	
4. Worker -3	8,000	3,000	11,000	27.27	6	1,833	11,402	-402	
Average	6,125	7,500	13,625	47.38	4.50	3,177	10,464	3,161	
Ceramic Production Group									
1. Leader	20,000	5,000	25,000	20.00	4	6,250	21,000	4,000	
2. Worker-1	5,000	2,000	7,000	28.57	6	1,167	5,490	1,510	
3. Worker-2	3,009	2,000	5,009	39.93	4	1,252	5,855	-846	
4. Worker-3	4,000	2,500	6,500	38.46	7	929	3,880	2,620	
Average	8,002	2,875	10,877	31.74	5.25	2,399	9,056	1,821	
Clothes Making Production Group									
1. Leader	14,000	3,000	17,000	17.65	4	4,250	11,970	5,030	
2. Worker-1	3,666	2,000	5,666	35.30	5	1,133	7,330	-1,664	
3. Worker-2	3,000	2,000	5,000	40.00	4	1,250	2,630	2,370	
4. Worker-3	5,000	2,500	7,500	33.33	5	1,500	6,219	1,281	
Average	6,417	2,375	8,792	31.57	4.50	2,033	7,037	1,754	
Overall Summary									
All Respondent	Income/month				No. in House-hold	Income per capita	Consumption per month	I - C	
	Husband	Wife	Total	% Wife's income					
Overall Total	87,775	87,000	188,425	548.40	66	47,422	152,332	36,093	
Overall Monthly Average	6,270	6,214	13,459	39.17	5	3,387	10,881	2,578	
Annual Average	75,235.71	74,571.43	161,507.14	39.17	56.57	40,647.73	130,570.29	30,936.86	

Attachment 2. INCOME ALLOCATION SURVEY FOR WORKERS

Worker's Respondent	Income/month				Number of People	Income per capita	Consumption per month	I-C
	Husband	Wife	Total	% Wife's income				
Artificial Flower Production Group								
1.Worker -1	5,600	3,000	8,600	34.9	6	1,433.33	7,530.00	1,070.00
Average	5,600	3,000	8,600	34.9	6	1,433.33	7,530.00	1,070.00
Woolen Doll Production Group								
1. Worker -1	5,000	3,000	8,000	37.5	4	2,000.00	4,482.00	3,518.00
2. Worker -2	3,500	4,000	7,500	53.3	4	1,875.00	7,962.00	-462.00
3. Worker -3	8,000	3,000	11,000	27.3	6	1,833.33	11,402.00	-402.00
Average	5,500	3,333	8,833	39	5	1,903	7,949	885
Ceramic Production Group								
1. Worker-1	5,000	2,000	7,000	28.6	6	1,166.67	5,490.00	1,510.00
2. Worker-2	3,009	2,000	5,009	39.9	4	1,252.25	5,855.00	-846.00
3. Worker-3	4,000	2,500	6,500	38.5	7	928.57	3,880.00	2,620.00
Average	4,003	2,167	6,170	36	6	1,116	5,075	1,095
Clothes Making Production Group								
1. Worker-1	3,666	2,000	5,666	35.3	5	1,133.20	7,330.00	-1,664.00
2. Worker-2	3,000	2,000	5,000	40.0	4	1,250.00	2,630.00	2,370.00
3. Worker-3	5,000	2,500	7,500	33.3	5	1,500.00	6,219.00	1,281.00
Average	3,889	2,167	6,055	36	5	1,294	5,393	662
Overall Summary								
Overall Total	45,775	26,000	71,775	369	51	14,372	62,780	8,995
Overall Monthly Average	4,578	2,600	7,178	37	5	1,437	6,278	900
Annual Average	54,930.00	31,200.00	86,130.00	37.00	61.20	17,246.83	75,336.00	10,794.00

Attachment 3. INCOME ALLOCATION SURVEY FOR GROUP LEADERS

Respondent (Leaders)	Income/month				Number of People	Income per capita	Consumption per month	I-C
	Husband	Wife	Total	% Wife's income				
Artificial Flower Production Group								
Leader		33,000	46,650	70.74	3	15,550	38,572	8,078
Woolen Doll Production Group								
Leader	8,000	20,000	28,000	71.43	4	7,000	18,010	9,990
Ceramic Production Group								
Leader	20,000	5,000	25,000	20.00	4	6,250	21,000	4,000
Clothes Making Production Group								
Leader	14,000	3,000	17,000	17.65	4	4,250	11,970	5,030
Overall Summary								
Respondent (Leaders)	Income/month				Number of People	Income per capita	Consumption per month	I-C
	Husband	Wife	Total	% Wife's income				
Overall Total	42,000	61,000	116,650	180	15	33,050	89,552	27,098
Overall Average	10,500	15,250	29,163	45	4	8,263	22,388	6,775
Annual Average	126,000	183,000	349,950	45	45	99,150	268,656	81,294

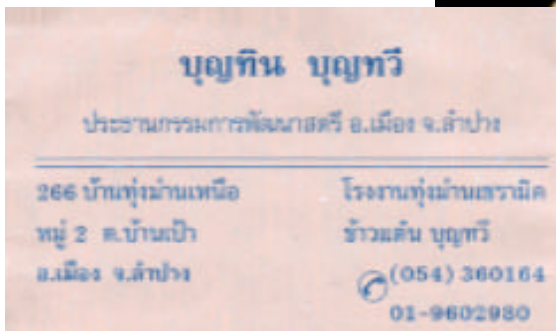
The Occupational Groups of Ban Thung Marn Nua, Thailand

Ceramics Group

Ceramic Product Line:

Elephants ,Tea pots

Chimes ,Jewelry boxes



Flower Product Line:



Flower Product Line

- Funeral
- Wedding
- Bouquet
- Corsages
- Made to order arrangements

Clothes Making Group



The Bangkok agent determines the product line for the Clothes Making group.

Items include:

.toddlers jeans & dresses

.baby jumpers

Doll Product Line:

Woolen Doll Making Group



- Teddy Bears
- Poohs
- Elephants
- Tela-bube
- Dogs

Sizes range from the size of your hand to a meter tall



Working Group 3

Integrated Rural Development Projects in Thailand

In Ban Ply Na Village –A Case Study

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1. Introduction

From the 30th of September to the 16th of October 1999, 32 students from the Graduate School of International Development of Nagoya University took part in Overseas Field Work (OFW) held in Lampang Province, Thailand. Participants were divided into 4 groups and we, Working Group 3, have been charged to do research on Ban Ply Na village, Tambon Thung Kwaw, Muang Pan District, Lampang Province under the supervision of Prof. Phaisal Lekuthai and Prof. Yoshihiko Nishimura with some students from Chulalongkorn as interpreters.

Our research theme is Integrated Rural Development. As a preparatory measure, all participants undertook an intensive training course in Project Cycle Management (PCM). Using these analytical tools based on the available information about Ban Ply Na village, we came to the conclusion that the core problem is “villagers’ income is not increasing”. However, an actual survey of the village proved us wrong, opening the way to a new problem.

As part of data gathering, work group 3 interviewed villagers to get firsthand information about the way of life in the village. We also visited Tambon Administration Office (TAO) of Tambon Thung Kwaw to learn about its role in the development projects in the village. Moreover, we were able to gain an access to many statistics, which proved to be useful for our analysis.

2. General Information

Ban Ply Na village is located in Tambon Thung Kwaw, Muang Pan District, Lampang Province about 60 km. from Lampang city in the middle of Northern Thailand. It has 172 households with total population of 750 people. Of this figure, 750, 352 are males and 378 are females. The population of Ban Ply Na is classified according to age. Under the age group 0-18, there are 176 people who make up 3.5% of the total village population. 466 people whose age range is within 19-60 years old make up 62.1% and 108 people over 60 years old comprises 14.4% of the total population. The average income per household in this village is 13,864 Baht. This is lower than the annual average income per household of Tambon Thung Kwao which stands at 15,579 Baht. In rating the development of Ban Ply Na village, an official indicator based on income level rated it at level 2 with 1 being the highest¹. In terms of geography, Ban Ply Na village has a total area of 6,268 Rai². The village occupies 4,357 Rai with 69.5% of the land area covered with forest. The village utilizes 1,710 Rai of land, 27.3% of the total land area, for agriculture. There is one school each at the primary and low-secondary level. According to the data from the school, the transition rate from primary school to lower secondary level is almost 100%.

Ban Ply Na village is under the integrated rural development project. All projects operated in the village can be categorized into two groups. One group has its focus on income generating activities such as chicken farming, food-processing and artificial flower making. The other concerns public services such as afforestation, basic healthcare and treatment, welfare provision for the AIDS infected. These projects cover the needs of villagers sufficiently.

At first glance, judging from the availability of diverse community oriented activities, one receives a good impression of Ban Ply Na village. Infrastructures in the village such as roads and electricity are well maintained and all projects seem well organized except for one project site which has been left unattended. The existing dam located in the river running through the village is noticeably a product of poor planning and engineering. The dam has been constructed in such a way that the waterway goes higher than the dike when the gate of the dam is closed,

¹ Classification of development level, level 1 implies that the average annual household income is less than 10,000Baht, level 2 is less than 15,000Baht, and level 3 is more than 20,000Baht

² 1Rai=1,600 m²=0.16hectare

overflowing into neighboring fields. The state of this project prompted villagers to discontinue the use of the dam although there is a pressing need for water in the near future. Accumulation of sand is another problem which hinders the use of the dam. A mass of sand carried from upstream in the river has been deposited in the dam so that the capacity for storing water remains low. The dam can be partially used if properly maintained by villagers, for instance, by removing the sand, thus increasing output and productivity of work or providing a new alternative of culturing fish.

Ban Ply Na village is under the strong leadership of the young and energetic village headman, Mr. Nikom Noppakhun. His strict enforcement of law and order has earned him respect among villagers. Violence, littering, improper disposal of garbage are prohibited and these rules are strictly upheld by villagers. To enhance the capabilities of villagers, the headman places great importance on education and training. Apparently, a high level of education and a well-organized community life do exist in Ban Ply Na village.

The Asian financial crisis in 1997 affected not only the urban cities and modern sectors in Thailand but also had a considerable impact to the village. During the daytime, young people can be seen not engaged actively in any work. According to some informants, these young people used to work in an urban area before the crisis, but were forced to return to the village due to business and factory closures or manpower reduction. While looking for a new job, they are helping their family in agricultural work even if they do not have a strong incentive to continue it.

3. Schedule of Working Group 3

During the period of our OFW program, only one week was allotted for field research in the Ban Ply Na Village. On 5th October we visited the village and paid a courtesy call to the village headman before setting off on our fieldwork. Table 3-1 shows the schedule of our activities.

3-1. Interview with Village Headman and School Principal

The first day was spent gathering general information by interviewing the village headman and school principal. The details of the interview with the village headman are shown in Table 3-2. The questions were geared towards information relevant to his village background, his leadership, present state of group activities, income level of villagers, life style and current issues or problems in the village. The purpose was to look at Ban Ply Na village from various viewpoints not only economic but also social, cultural, institutional to make sure that other major problems in the village would not been ignored other than income.

Following the interview, Working Group 3 visited the two school. Ban Ply Na village has one primary school and one lower secondary school which are both located inside the village. The interview was successfully

Table 3-1 : Schedule of our research

date	Activities
5 th October	Interview with school principal and village headman
6 th October	Interview with TAO staff / Interview with villagers
7 th October	Interview with villagers
8 th October	Interview with villagers / Home stay at the villagers houses
9 th October	Visit to a morning market in the village / Interview with villagers
10 th October	Day Off
11 th -13 th October	Making problem analysis, objective analysis and proposal
14 th October	Rehearsal for presentation
15 th October	Final presentation

Table 3-2: Question to village headman

<p>Questions asked the village headman:</p> <p>When did you become headman?</p> <p>What did you do everyday as a village headman and as a chairman of TAO?</p> <p>What kind of background do you have, such as educational background and job experiences?</p> <p>Why did you become headman?</p> <p>How did you motivate villagers to be involved in the projects?</p> <p>What is the most important thing as a village headman?</p>
<p>Questions regarding group activities in the village:</p> <p>When and why did you start the projects?</p> <p>According to the blue book that you wrote, there were 11 activities when you started the activities, and according to the green book Professor Phaisal wrote, there are 10 activities in the village. What is the exact situation right now?</p>
<p>Questions regarding income generating activities:</p> <p>Which activity is increasing fastest in output?</p> <p>How much is the average income of the villagers? Is it increasing?</p> <p>How much is the target income in the future?</p>
<p>Current issues in the village:</p> <p>What is the biggest issue or problem in the village now?</p> <p>How many people returned to the village in the last year?</p> <p>How many people returned to the village in 1998?</p> <p>Out of the people who came back, how many of them are unemployed?</p> <p>Do all of the villagers participate in the projects?</p> <p>Were there any conflict between the project and the tradition of the village when you started the project? Or did you make use of any elements of the tradition?</p> <p>What was the reaction of the elder people in the village when you started the project? Did any of them opposed?</p>
<p>Questions about the life of villagers:</p> <p>What is the biggest change in the villagers' life before and after the project?</p> <p>What kind of health care service do you have in the village?</p> <p>How many people are infected by HIV in the village?</p> <p>What kind of health care service do you provide in the village?</p> <p>In what ways do you think education will contribute to the project?</p> <p>How do temples and monks relate to the project?</p> <p>Are people from temples and monks involved in the project?</p>

conducted with the school principal who is responsible for managing both primary and secondary school. Issues pertinent to education in the village were discussed. Among the topics, our major concern was to get information about students receiving financial assistance for education which we used as a criterion to know the current living condition of each family.

3-2. Interview with Tambon Administration Office (TAO)

On the second day, members of our group were split into three working teams. Two working teams started the income survey with villagers while the other team visited TAO to collect data concerning financial resources of TAO and allocation of expenditures, as it is deemed essential to know the financial linkage to project activities in the village. To cite an example, villagers are permitted to borrow chickens from TAO that are provided by its budget.

3-3. Interviews with Villagers

Of the 171 households, Working Group 3 could only interview 18 households due to time constraints.

Questions were mainly focused on family structure, income, expenditure and property such as automobiles and livestock. The income here includes agricultural yield, agricultural income, non-agricultural income. After interviews, we summarized the data per income group i.e. low-income group and high-income group. Further details will be discussed hereafter.

4. Literature Search

To support our analysis, the following sources of information were utilized:

- 1). Thung Kwao Tambon Administrative Office (TAO), 1998, Summary of the General Condition of the Tung Kwao Tambon Administrative Office, mimeograph.
- 2). Nikhom Noppakhun, 1998, Individual Report presented to the Committee of the Lampang Village Headmen Contest, mimeograph.
- 3). Weera Kongkaeow, 1999, Community Development in Thailand, mimeograph.
- 4). Paisal Lekuthai 1999, Urban and Rural Development in Thailand: A Case Study of Lampang Province, Nagoya University GSID Discussion Paper No. 68

Regarding the secondary sources, No.2 is the detailed report about BPN village written by the village headman. No.3, written by regional government officer, is about community development of the region where Lampang Province is included.

5. Deciding upon the Core Problem of the Village

Using the available information about the village obtained in the preparatory seminar, we had a discussion to establish our main focus during the fieldwork. Under the integrated rural development project, the village has undertaken a number of diverse activities in order to improve the welfare of the villagers. Because of focus of our discussion over the core problem went in many directions and did not settle into shape in the beginning. After further discussion, the core problem was tentatively set as the stagnant increase of villagers' income level. Though other issues such as operational failures in the village activities were likely to emerge as candidates, issues on income were given priority for two reasons. First, it was stated in the report by Prof. Paithal of Chulalongkorn university that increase of the villagers' income was slow. Second, on the whole, most of the activities seemed to have performed satisfactorily with adequate results, making our group feel less need to extend coverage as far as operational issues of the village activities.

6. Conducting survey to collect household income data

Based on the core problem, the actual survey was conducted during the fieldwork to collect villagers' income data for the last year 1998. In preparation for the survey, we obtained some information from the school principal about the home situation of each family and narrowed down the number of sample families to a manageable size. As previously discussed, in deciding the coverage of the survey, families whose children are recipients of financial assistance for education were taken into consideration as it implies that the family belongs to a low income group. 11 families were chosen as the low income group and 8 for the high income group. The interview was conducted at all 19 households based on the questionnaire *(See Diagram 6-1) and one sample was excluded from our analysis due to insufficient data quality. The questionnaire was designed to cover three main categories: family structure, income and family properties. The number of family members in a household serves as an indicator in determining the

sufficiency of household income in maintaining a subsistence living for the family. Importance was also placed on the family structure as families of kin tend to reside close to each other. In some cases, they live under the same roof or provide support by sharing meals, thereby influencing the relative importance of their income level and actual living standard. Measuring the income level is done in two ways. Income is divided into cash income and income in kind. For example, consumption of rice yield from their own land is considered as income in kind, whereas it becomes an agriculture cash income when surplus is sold in a market. The same criterion is applied for chicken raising, pig raising and home gardening. Salaries from construction work, tobacco factories and remittance are considered cash income. Financial assistance for education is also included in this category. Categorizing family properties and determining the time when the purchase is made are necessary to comprehend economic activities of the household. A new car purchased on cash in the last year, for instance, falls in the category of savings not as spending. Ownership of livestock discloses the wealth level of a household because the family has enough financial strength to divert money for supporting such an activity. Agricultural land is another important criterion. In addition to all these considerations, expenditures per household have been taken into account to back up the validity of the income data.

7. Results of survey

7-1. Extraction of data

Among the various factors as per above, we have made a decision to extract only cash income data for analysis. However, it turned out to be difficult to estimate the level of living standard as some data and goods are not represented in the cash income flow. For example, it is difficult to evaluate what relation there is between value of properties and income level as it often happens that some people purchase properties with cash while others do the same on installments. Income in kind has been excluded for the same reason coupled with the fact that its impact is limited to food consumption from their own agricultural yield such as rice and vegetables.

7-2. Validity of data

Regarding validity of the data, for several reasons it is inevitable that result of our survey does not represent the actual distribution of household income data for the whole village, rather it is only valid for our analysis. Random sampling was not adopted in our survey, but it was intentionally arranged so that the same number of families would be interviewed from both low income group and high income group. One intention behind this was to confirm if children receiving financial assistance for education are in the end coming from families belonging to low income group. With all these statistical constraints, we summarized the results as per the following.

Diagram 6-1: Sample of Questionnaire for Income Survey

Questionnaire with Villagers (Group 3)

Name, family structure, number of family members, age, home town (male).

What is your income source How much (cash / quantity (output))

rice production,
farming(non-rice*),
bamboo basket,
home garden
chicken raising,
pig raising
food processing
artificial flowers,
 other occupations
(monthly salaries, remittance)

How much is your total income (yearly, monthly, weekly)

Do you have anybody in a family who is working out side of the village and being able to send money or gift to you?
If yes,
 How often?
 How much in each time?

Do you receive any subsidies?
If yes, which kind of subsidy?
 For education
 For babies

Do you have any loan?
If yes,
 How much did you borrow?
 For what purpose did you use the loan?
 Who is the lender (bank, fund, relatives)?

What kind of properties do you own?
 Car
 Motorcycle
 Agricultural land
 Livestock
 Storage
 (television, ref., washer machine)

Do you have cash savings?
If yes,
 How much?

How much do you produce rice?
 Not enough for family consumption
 Just enough (almost equal to family consumption)
 More than enough (selling rice to market)

If not enough,
 Buying
 Borrowing, others(specify)

Please list up major expenses

Item	Amount
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7-3. Comparison at district level

Annual income per household of Ban Ply Na village was 13,864 Baht for the year 1998, ranking 10th among 11 villages in the same Tambon Tungkwao (the half-tone area in Table 7-1). Evidently the income level of Ban Ply Na village is not high in comparison to other villages at the district level. Based on these statistics, we initially drew

our hypothesis that the increase of villagers' income is stagnant. It was presumed that various factors were causing operational problems in the project and interrupting village activities towards increasing output and successes. However, as will be explained later, we have been forced to change this hypothesis.

7-4. Comparison at the village level

Table 7-2 is a summary of our survey results, showing annual cash income per house hold for the year 1998. The average amounts to 77,712 Baht. This figure is much higher than the average amount published by TAO. The considerable gap between the two figures can be explained by the way the sampling was conducted and the fact that TAO survey excluded non-agricultural cash income. The highest cash income for the last year among 18 households was 475,200 Baht. This family (Sample No. 12) is involved in various business activities. The family made a profit of 96,000 Baht from artificial flower making and cash income of 90,000 Baht from pig raising. In addition to these, their rice harvesting is more than what they consume. The surplus was sold and the family received 28,000 Baht for the transaction last year. On the other hand, the lowest cash income was a mere 1,200 Baht. Last year, 5 members of a family (Sample No. 14) subsisted on 99 tons of rice harvested from their rice field and eggs laid every two days by their own chickens. The major cash income for them was 1,200 Baht from selling one pig in a market to supplement their living. They received some food assistance in kind such as rice by other people in kin or neighbors.

Table 7-1 Average income per household, per year (1998) of Tambon Tungkwao

Village Number*	Rank	Annual Income Per Household
2	1	19,282
3	2	16,504
1	3	16,219
4	4	16,015
11	5	15,768
10	6	15,597
5	7	15,487
8	8	14,847
9	9	14,233
7	10	13,864
6	11	13,550
Total		171,366

Average Per Village	15,579
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Source: Tambon Administration Office (TAO) of Tambon Tungkwao

Note: Village number of Ban Ply Na Village is 7.

Table 7-2 : Result of Income Survey

Annual Cash Income per Household (1998) of Selected Families in Ban Ply Na Village

Unit : Thai Baht

Sample No.	Annual Cash Income
1	115,200
2	21,800
3	10,000
4	16,240
5	184,300
6	145,600
7	4,150
8	8,680
9	7,500
10	12,400
11	105,950
12	475,200
13	81,200
14	1,200
15	6,150
16	4,645
18	119,600
19	79,000

Average per Household	77,712
-----------------------	--------

One significant observation we can make from the survey result is that an income gap among villagers does exist to a considerable extent. Not to be overlooked are families living on a subsistence income as we have seen in the above examples. Facing this fact, our group had to modify the core problem to “the income gap among villagers is big.”

Turning our attention to income equity in the village, it can be concluded that there exists a big income gap among villagers. Looking at the average annual cash income for each income group, 10 families in the low income group had only 20,332 Baht, while it was 149,437 Baht for 8 families in the high income group (See Table 7-3 and Table 7-4).

We would like it to be noted again that the definition of “high “ and “low” income groups are as per previously explained. We tentatively classified families whose children are scholarship recipient to be belonging to the low income group and the high income families were chosen based on the information from school teachers and villagers.

One of the features common to families with income particularly below 10,000 Baht per annum is their non-possession of land. Income of 5 land less households is 27,765 Baht while that of 13 land-owning families is 96,922 Baht. It seems that these land-less families are denied any means to produce rice enough for their food consumption, consequently they are unable to generate cash income by selling rice surplus as is the common practice of land-owning families. Moreover, these land-less families need to spend money for buying daily food. Though other disincentives will be discussed later, it can be inferred that because of the less sustainable life cycle and financial constraint, they are hardly motivated to divert their efforts to income generating activities such as pig raising and artificial flower making, remaining stranded in a vicious cycle of low standard of living. Decomposing the total cash income into two parts, namely agricultural cash income and non-agricultural cash income respectively can support the assertion. Result of the calculation will show that the average agricultural cash income per household amounts to only 12,633. A close relationship is deemed to exist between the figure and TAO income survey result for 13,864 Baht. Indeed, our interview with TAO offices confirms that their statistics does not include income from non-agricultural activities. On the other hand, the average non-agricultural cash income per household amounts to 65,079 Baht.

Table 7-3 : Result of Income Survey

Annual Cash Income per Household (1998) of 10 Low Income Families in Ban Ply Na Village

Unit : Thai Baht

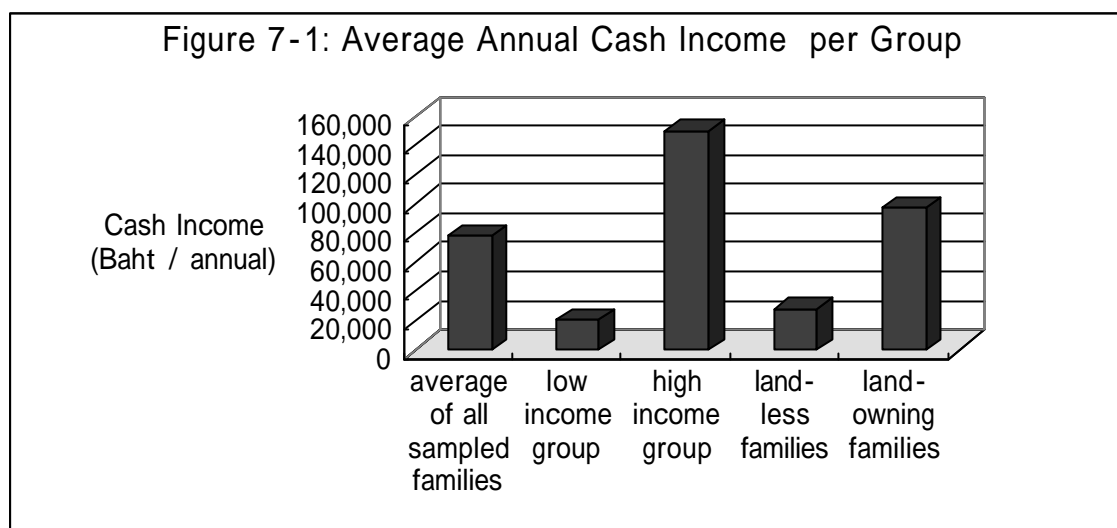
Sample No.	Annual Cash Income
1	115,200
2	21,800
3	10,000
4	16,240
7	4,150
8	8,680
9	7,500
10	12,400
14	1,200
15	6,150
Average per Household	20,332

Table 7-4 : Result of Income Survey

Annual Cash Income per Household (1998) of 8 High Income Families in Ban Ply Na Village

Unit : Thai Baht

Sample No.	Annual Cash Income
5	184,300
6	145,600
11	105,950
12	475,200
13	81,200
16	4,645
18	119,600
19	79,000
Average per Household	149,437



From these analyses, a rough picture of the village emerges where a group of people are successful in non-agriculture village activities and their own businesses, increasing their income level rapidly, while another group of people still remains stagnant in improving their living standard. Therefore, it can be concluded that it is important to involve villagers especially those from low income group into non-agricultural income generating activities.

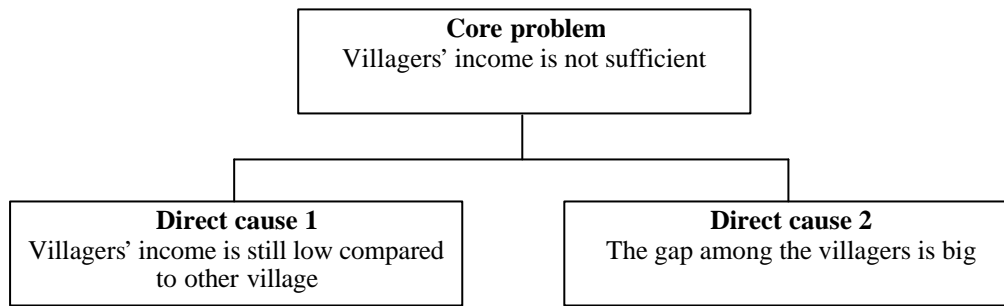
8. The Explanation of Problem Tree

Based on the results of the survey, we have developed the following problem tree. Direct cause No. 1 is the relatively low income of the villagers compared to that of other villages. Direct cause No. 2 is the income gap among the villagers. Five reasons were raised as candidates related to these causes, namely (2-1) Villagers cannot find markets to sell crop products (A), (2-2) Surplus of products from activities does not increase.(A), (2-3) Villagers do not have strong incentive to join activities.(N), (2-4) Villagers do not have choice to commercialize products.(N), (2-5) The income of villagers belonging to low income group does not increase (A.N).

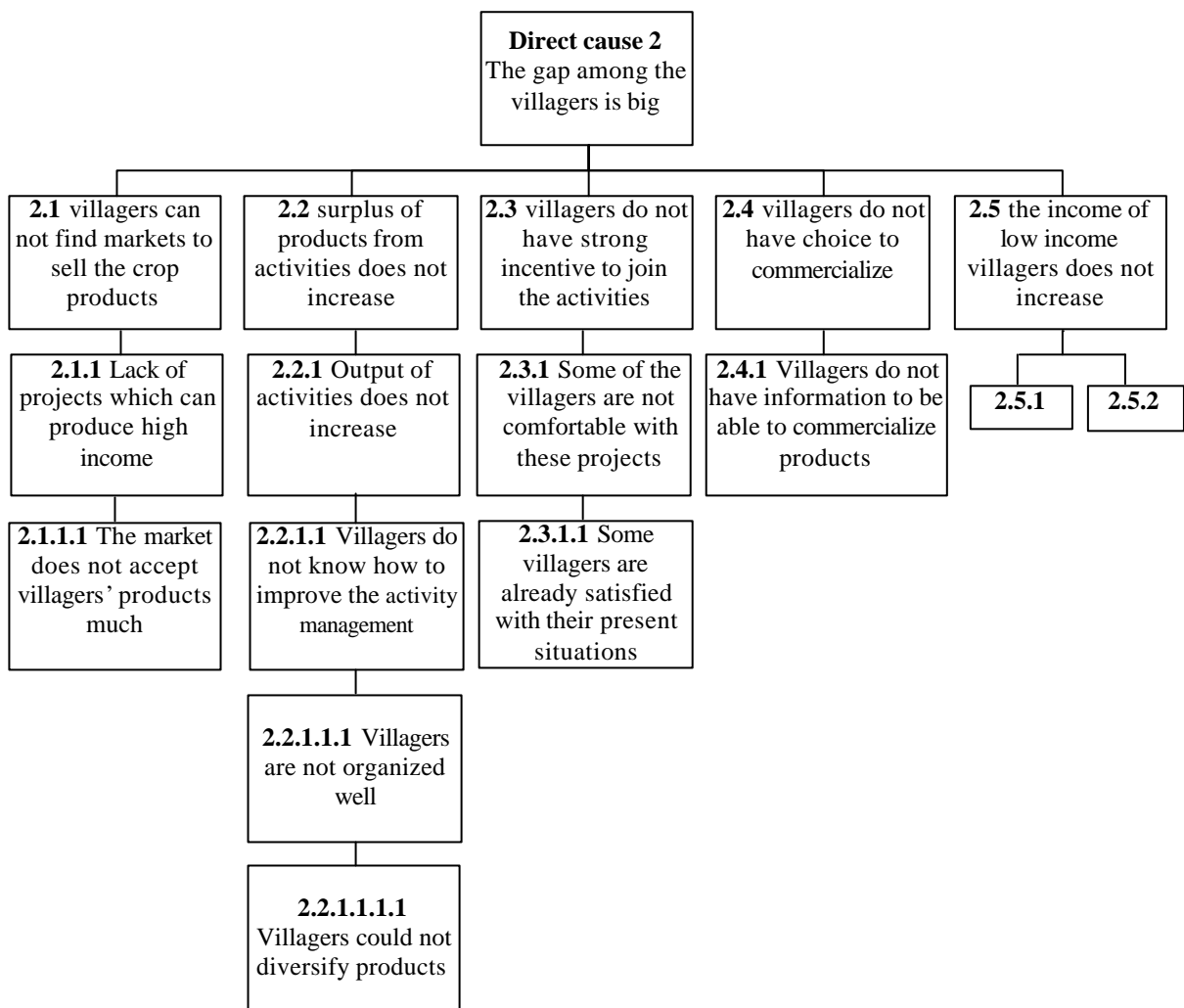
Among these 5 reasons, we decided to focus on the last one. One reason for the low income of villagers has to do with non ownership of farming land. The other reason is, as shown earlier, that one of the ways to increase the income is participation in non-agricultural activities. From our observation, some villagers particularly those belonging to the low income group are reluctant to join these activities for lack of incentives. Second, some villagers missed the opportunity or the time when the village provided skill training with them. Third, some villagers are too busy with the existing jobs to allocate their time for other activities. Lastly, some villagers do not have financial means to sustain the activity, for example, they are short of money to buy food for chicken raising.

8-1 Problem Tree

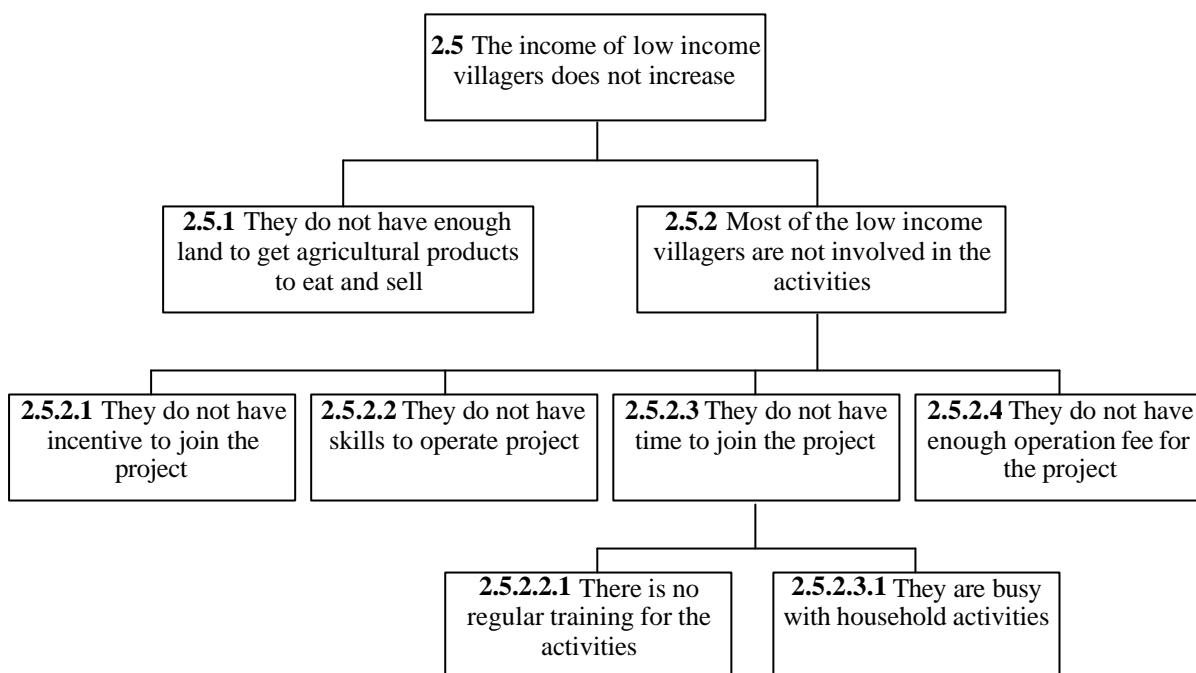
Flow chart: Core problem—Direct causes



Flow chart: Direct causes—subordinate causes

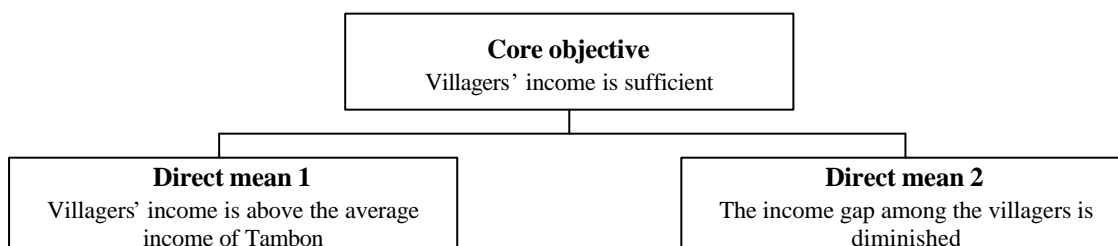


Flow chart: Cause 2.5—Subordinate causes

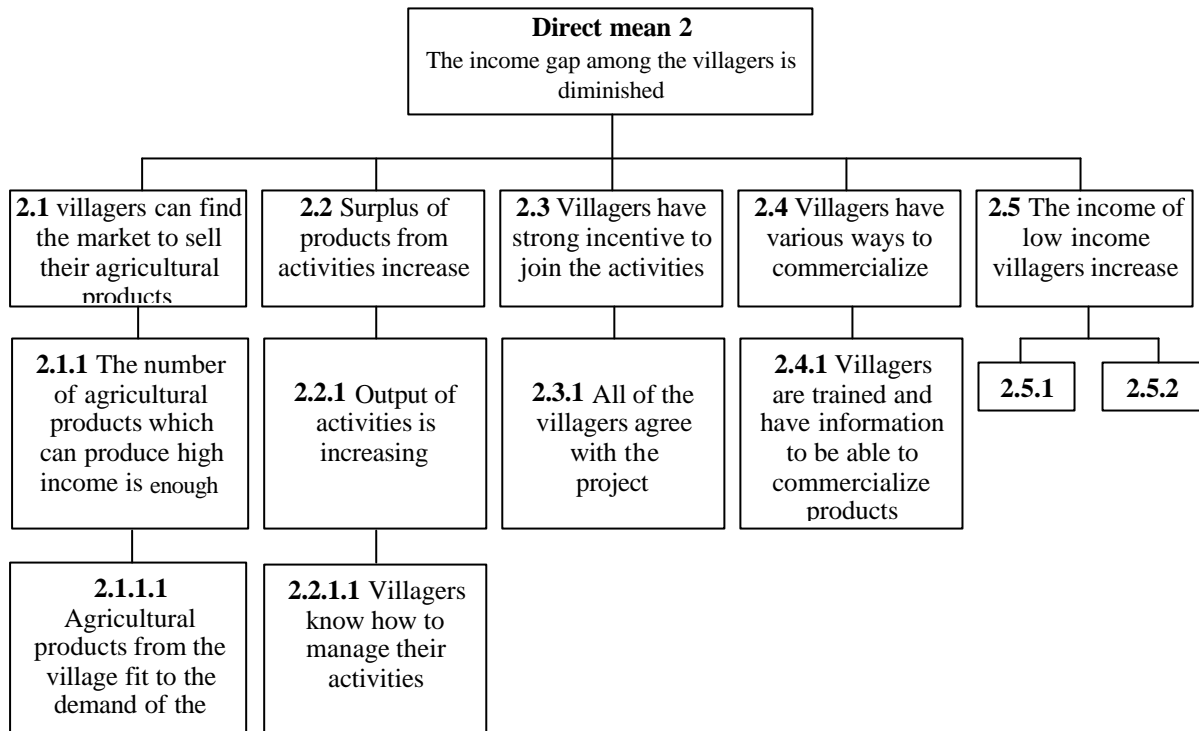


8-2. Objective Tree

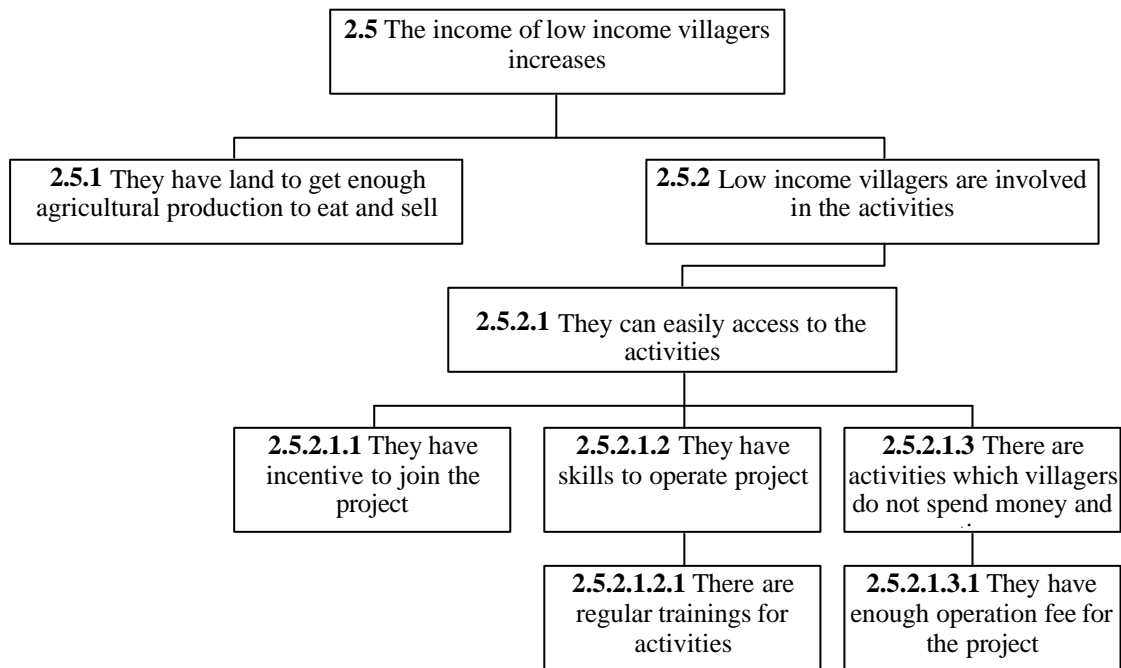
Flow chart: Core objective—Direct means



Flow chart: Direct mean 2—Subordinate means



Flow chart: mean 2.5—subordinate mean



9. Objective Tree

Since the core problem is "Villagers' income is not sufficient," the core objective for solving the core problem is "Villagers' income is sufficient." When we think about this sufficiency, there are two types. One is the

sufficiency compared to the other villages, and the other is the sufficiency within the village, especially the gap among the villagers.

Because of the information constraints, our survey was mainly concentrated on the latter one, the gap among the villagers because of the information constraints. Therefore we have to leave the direct means 1 here, and discuss the direct means 2, "The income gap among the villagers is diminished."

In order to achieve this objective, there are five means that we could suggest. These are "Villagers can find a market to sell their agricultural products," "Surplus of products from the activities increases," "Villagers have strong incentive to join the activities," "Villagers have various way to commercialize," and "The income of low income villagers increases." Among these five means, the last one became our main concern through the survey because we had never thought about such a big gap among the villagers before seeing the actual situation.

There are two means to increase low-income villagers' income. One is to let them have enough land to increase their agricultural income, and another is to get them to be involved in the project to increase their additional income. For the land, it seems to be quite complicated for us to think about the means, therefore, we just stopped thinking about it.

"Villagers can gain easy access to the activities" can be an effective means to let the low-income villagers know that they can be involved in the projects too. There are three means to achieve this.

First one, "Villagers have incentive to join the project." During our survey, we asked some villagers why there are some people who do not join the project. Then, the reply was that they did not feel like doing so. We could not find any further reason causing this tendency. Our discussion did not extend any further; therefore, this case was closed.

Second, "Villagers have skills to operate project." Some villagers actually wanted to join the project, but eventually gave up because of the lack of certain skills. At the conception of the project in BPN, some villagers were not interested in the project, so they did not have training. However when they changed their mind and wanted to join, no training was available. Therefore, other chances of receiving training could be the means.

The last one, "There are activities on which villagers do not need to spend money and time." Most of the low-income villagers do not have enough money for the operation fee, and also they do not have time for joining the project because of irregular family structure. For example, we saw one family whose father had already passed away. Mother was working in Bangkok for their cash income, so the only family members staying in BPN were the grandmother and the son. It was almost impossible for them to participate in the project in addition to their daily work in the paddy field. Therefore, giving them the opportunity to let them join in the project would be the mean.

10. Recommendations to Improve the Project

As a whole, the primary objective has been achieved by the village through various activities under strong leadership. As a result, BPN got awarded many times and a lot of households increased their additional income. However, the result of our survey indicates that there is a pressing need to increase the income of the low income group. In order to achieve this objective, ordinary income generating projects proved to be effective in increasing the average income level of the villagers but it has limitations as a various factors are still preventing villagers of low income group from actively participating in the projects. While the village needs to take measures to encourage more participation of villagers in projects, it is deemed a necessity to provide a safety net project for those who live subsistence.

As for the participation of villagers, we strongly felt that it is necessary to let the low-income people participate in the activities in order to increase the income of the whole village. The main idea of our

recommendation is to give people more opportunities to participate in activities. The following are the more concrete recommendations.

First, the training should be given on demand. There are some people who missed the first training at the beginning of the activities, and lost the chance to gain certain skills needed for the activities. It is one way to give them the training when they need it. It would be better to be held in the evening or the non-harvesting season for the farmers.

Second, activities should be geared toward those who were not involved in the activities. The project has been implemented for the improvement of the BPN as a whole. As a result, some low-income villagers are left behind the "average" development. Therefore, it is necessary to implement the project from a different point of view. The point of view should not only be from the whole village, but also from the individual level. Then, as a result, the whole village can achieve the true success of integrated rural development.

Third, new activities for those who are not involved should be established. For instance, there are nice canals running the village. Making use of the canals by fish raising is an activity that is easy to join and operate especially by those who have no skills or money for the operation fee. It is also one way to start new activities close to the villagers.

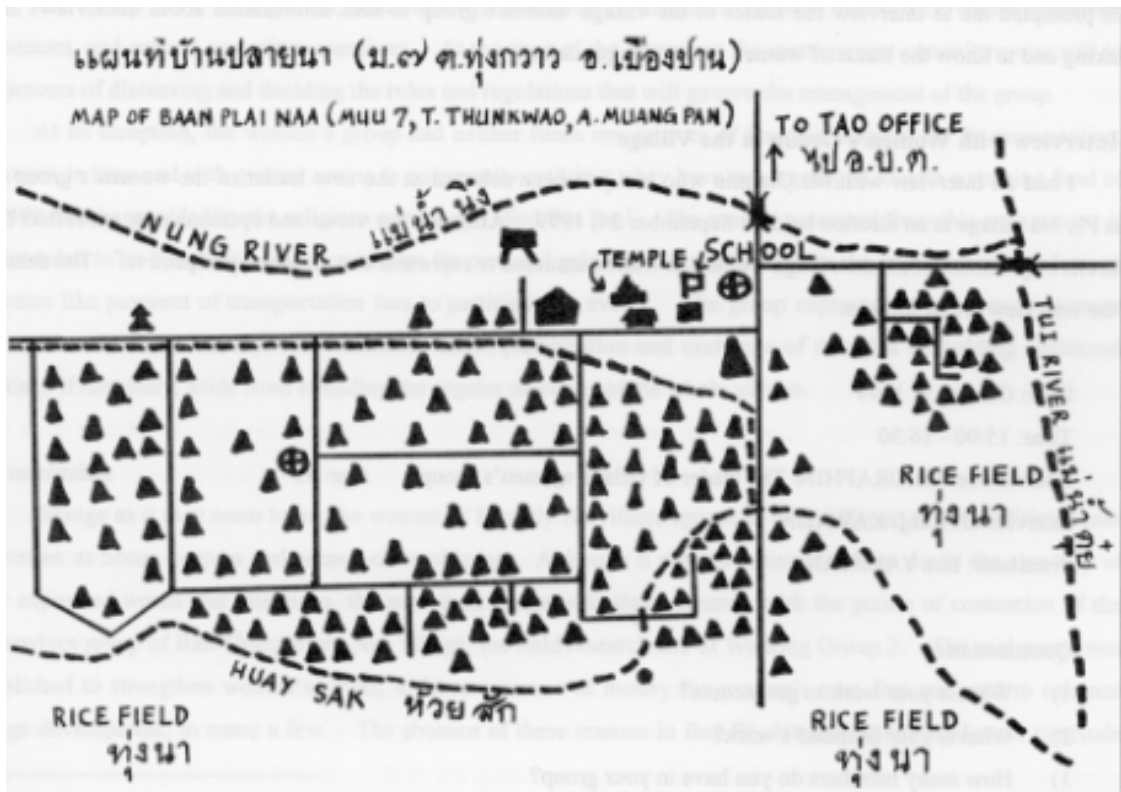
11. Conclusion

The major finding in our field survey is the average income of villagers income in Ban Ply Na village seems much higher than statistics by TAO. This is because of the success of integrated development project in the village. However, in spite of the success, results of our survey shows there is an income inequality among villagers in Ban Ply Na village. The survey also found that many of villagers in the low income group do not participate in non-agricultural income generating activities. Many of land less farmers belong to the low income group too. Aside from financial assistance, offering more training opportunities in village activities is worth trying in order to let more villagers from the low income group join the activities. Though income was major concern in our analysis, our group members have come up with recommendations to make a further improvement in integrated project such as maintaining the capacity of the dam from observations in the village.

The Location of Ban Ply Na Village



The Map of Ban Ply Na Village



Working Group 4

Mushroom Production Project

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1. Introduction

Bang Pang Ma O is a small village located in Moo 8, Tambon Wang Ngoen, Mae Tha District (D-06), Lampang Province. The villagers are engaged in mushroom production. Our Shiitake group (WG4) was assigned to conduct a research on present situation and provide suggestions for ongoing project in this village.

A proverb says “seeing is believing”. Exactly so, we think. Before visiting Thailand, we analyzed this village by using the Project Cycle Management (PCM) method. But in Japan, we didn’t have enough information about the village and so we tried imaginable method to analyze the village once in a while. Then occasionally our analysis was different from the present situation of the village. Every time we found a difference, we needed to correct and reanalyze it. But by doing so, our understanding to the village was deepened day by day.

During the process of our work, sometimes there were disputes among us. But we know that it means “we grappled whit our work seriously”.

The central purpose of this report is to prove ways to increase cash income of the mushroom producers. The main analysis tool employed in the research is PCM, along with some date collection methods. The succeeding findings have resulted from the fieldwork in the village itself, and analysis and discussions of data from available literature and from informants during the research.

The report is framed under; general information on the village, analysis of collected data, PCM analysis, economic analysis, conclusions and recommendations.

2. General Overview

Ban Pang Ma O is a small forest village . There are 84 households in Ban Pang Ma O with the population of about 255 people in 1998(146 are males; 109 are females). The villagers are allowed to live there, but they have no right to own the lands. Neither are they allowed to extend their activities nor housing into the reserved forest area. Before 1992, all the villagers were selling forest products and producing artificial flowers. Since 1994, they began to produce Shitake mushrooms. In their mushroom production, they exchange labor and receive technical and financial supports from CDD (Community Development Department), Tambon Agricultural Extension Office, Informal Education Department and Chiang Mai University students. Recently Social Investment Program provided fund of 280,000 Baht to support poverty-solving activities in the village. Three years before the village development level was classified as level 1, but now it becomes level 2. Last year, Ban Pang Ma O’s average annual income per household was 22,000 Baht.

Some of the existing resources of the village are a primary school, a daycare center, a sub-health center (almost non-operational) and three commonly used water tanks. Some parts of the roads in the village are difficult to travel by vehicles during rainy season.

3. Data collection and analysis

3-1 Research methodology

During OFW for data collection our group used four methods of research: questionnaire, interviews, observations and official documents study.

As the main source of primary data for problem analysis we conducted a questionnaire the example of which is given in Appendix.

The object of the questionnaire were 25 households of Pang Ma O village, located along the main village road, that were kindly selected for us by the village head woman. In force of circumstances, we also admit that there might be a certain deal of bias in data.

Therefore, we had to consider this data in comparison with other data we got from observations, interviews with the village head woman, officers from Community Development Department, Tambon agricultural extension office, Provincial Administration Organization, and others and official data from “Joo-Poo-Too”(“Basic Human Needs Indicators”) and “Khoo-Choo-Choo-Song-Khoo”(“Indicators of village Development”).

3-2 Data analysis

The following is the summary of the primary data we got from the questionnaire which then served us as the basis for the problem analysis.

The main daily life problems of the villagers (figure 1) are related, first of all, with what we classified as “**infrastructure**” problems, that implies basically the road condition and water supply in the village.

Then, also the common problems are:

- “Health” (in terms of difficult access to the Health Center which is situated in a long distance from the village);
- “Accommodation” (that is the size and quality of their houses);
- “Education” (most of the respondents have only primary level of education and cannot afford further education).

The main problems in mushroom business that prevent the producers from expanding their activities (figure 2) are, first of all: **insufficient fund** and **low price of mushrooms**. Also, the problems of production techniques and land limitation.

Among “others” the most common problems are:

- they have to wait for other ingredients for a long time;

Figure1. Main Daily Life Problems of Ban Pang Ma O Villagers

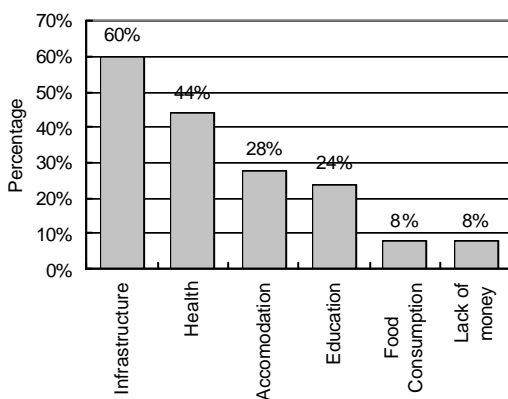


Figure2. Main Problems in Mushroom Business

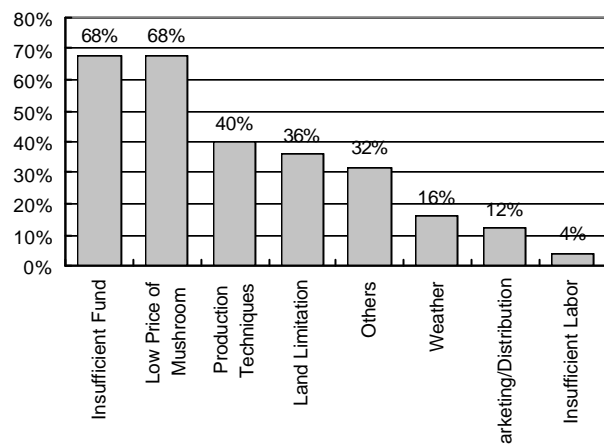


Figure 3. Monthly Income from Mushroom Production per Household

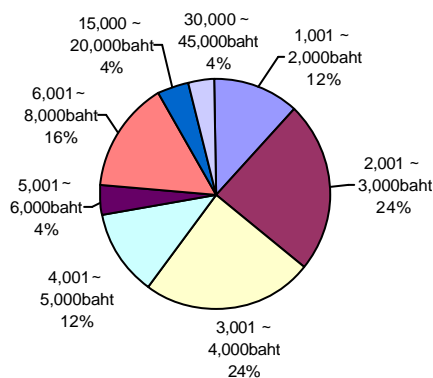
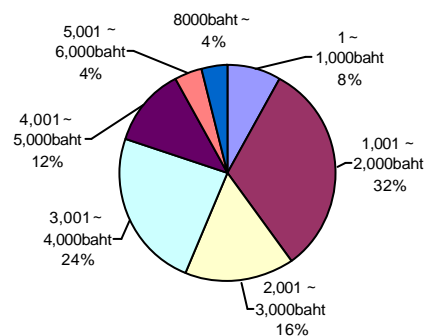


Figure 4. Monthly Expenditure per family



- outsiders with capital using the village land for mushroom production and dumping the prices;
- mice, etc.;
- lack of building materials for a greenhouse;
- high cost of ingredients;
- “Rakhiao”(mushroom mould disease);
- low quantity of mushrooms.

The monthly income from mushroom production of 60% of the respondents is up to 4,000 baht (figure 3). We classify this group as the lower income group in the village. This data corresponds to the monthly expenditure per family (figure4).

The monthly expenditure of the same share of households is also up to 4,000 baht. Therefore, there are no saving opportunities in the village.

On the other hand, the low expenditure rate is explained by the self-sufficiency of household economy in the village (most of the families don't need to buy food).

The number of bags a producer has (figure 5) in almost the half of the households is up to 2,500 bags per household, when the desirable number of bags for family (figure 6) is twice as much- from 2,500 to 5,000 bags for the same share of households.

By the “desirable number” we mean how many bags a producer thinks would be enough to support his/her family and he/she would be able to produce with sufficient funds provided.

The serious problem of the villagers in their mushroom business is a high percentage of production loss (figure7) caused

Figure5: Number of Plastic Bags per Household Figure 6. Number of Bags Desirable for Family

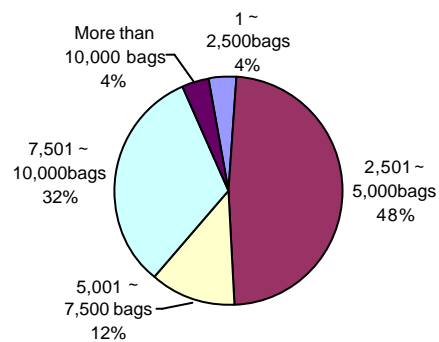
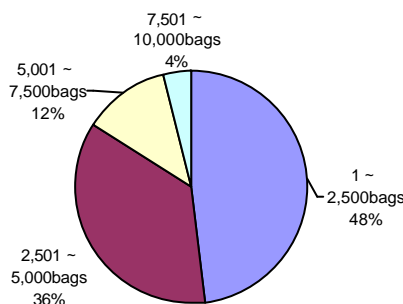


Figure7. Percentage of Production Loss per Household

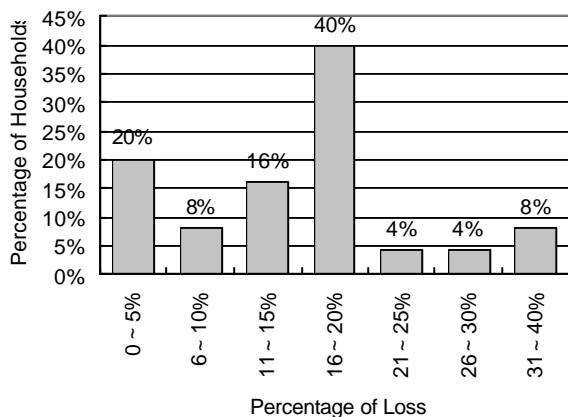


Figure 8. Ways of Waste Utilization

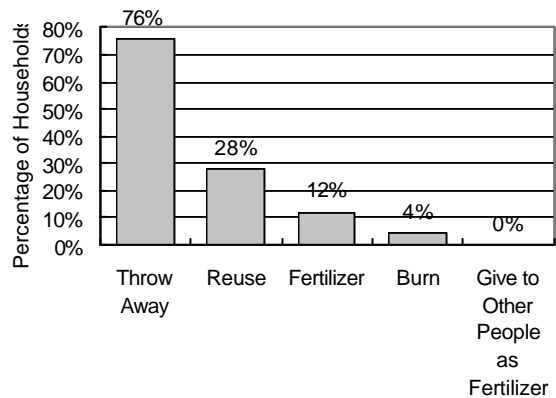


Figure 9. Ways of selling mushrooms

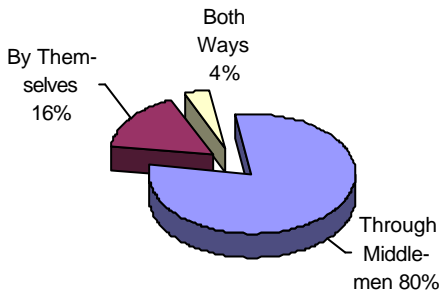
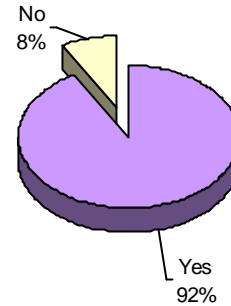


Figure 10. Support For Setting Up Cooperatives in Ban Pang Ma O



mainly by “Rakhiao”. The most of the households have failure rate of 16~20%.

As for the ways of waste utilization (figure 8) the questionnaire data shows that actually nobody gives wasted bags to other people as fertilizer that doesn’t confirm the common information we got from other sources that this is the regular way of waste utilization. On the contrary, over 70% of households simply throw the waste away. Other households although reuse wasted bags for mushroom production or use them as fertilizer.

The overwhelming majority of producers sell their production through middlemen. The small part of better-off households market their products themselves or use both ways.

Therefore, the issue of setting up cooperatives in the village is very important for the producers. Almost every one of the respondents supports the idea of a Cooperative (figure 10).

For the reasons in favor of a Cooperative the villagers realize that a cooperative will provide:

- stable higher price;
- direct access to market;
- storing facilities;
- will reduce competition.

Those who are against setting up a cooperative recon that:

- it is unfair;
- will cause disagreement among the villagers;
- will make income distribution difficult.

On the other hand, many of those supporting the idea as a whole still have various doubts regarding its feasibility as they have no knowledge about cooperative system and cooperative management and therefore are in general afraid of failure.

4. The PCM Method Application

4-1 Problem Analysis

Based on the analysis of the collected data our group did the problem analysis of the situation in Bang Pang Ma O using the Project Cycle Management method and developed the Problem Tree.

Our Target Group was “mushroom producers of Bang Pang Ma O”, that is actually the whole population of the village, and the Core Problem is: “The villagers don’t have enough cash income”. We found three Direct Causes of the core problem that are:

1. “They produce low quantity of mushrooms”, which derives from the issues mainly related to the problems of production

- technology, natural constrains, production costs and land limitation;
- 2.“The Value Added of mushrooms is low”, that is due to the problems related to **diversification** matters;
- 3.“The price of mushrooms is not satisfying to the producers” because of the **marketing** problems.

The various definite indirect causes and Effects of the core problem are given in detail in our ‘Problem Tree’ (see Appendix).

4-2 Objective Analysis

The next step of our work was the Objective analysis where we defined the Direct and Indirect Means to achieve the Core Objective “The villagers have sufficient income” which would result in improvement of the villagers’ life level (see Appendix). To satisfy these objectives, based on our findings and economic analysis of mushroom production given below, our group has elaborated a set of concrete recommendations to the ongoing mushroom production project that would have a positive impact on Bang Pang Ma O village development, which is summarized in the last section of the report.

5. Economic Analysis of Mushroom Production

The following part is an analysis of economic aspects which comprises a price analysis, a cost analysis and an expenditure-earning analysis.

5-1 Price Analysis

This analysis is mostly based on primary data obtained through market observations at a local market and a supermarket in Lampang municipality as well as through a questionnaire and interviews with parties involved.

5-1-1 Existing Marketing Scheme

This existing marketing scheme consists of four main agents which are the mushroom producers, the village’s middlepersons, the outsider middlepersons and the retail business sector including local markets and supermarkets. As shown in Figure X, at the producer level a kilogram of mushrooms is sold at a price of 80-100 bahts or on average 90 bahts (based on an empirical observation) to the village’s middlepersons. Then the village’s middlepersons sell it to the outsider middlepersons at a price of 90-110 bahts per kilogram. This means the village’s middlepersons gain a profit of around 10 bahts per kilogram. In the next stage, the outsider middlepersons sell it directly to the retail business sector at a price of 100-120 bahts per kilogram. This implies that the outsider middlepersons gain a similar profit as the village’s middlepersons. Finally, at local markets

Mushroom Producers	Village’s Middlemen	Outsider Middlemen	Local Markets
80-100B	90-110B	100-120B	120-130B
Avg. 90B			Supermarkets 250B

consumers can buy a kilogram of mushrooms at a price of 120-130 bahts while at supermarkets the price is much higher which is around 250 bahts per kilogram.

The above figure indicates the most common way of marketing of the mushroom product. Other ways of marketing are, for example, that the mushroom producers sell directly to the retail business sector; but this seldom occurs. From the figure,

it can be noticed that the existing marketing chain is lengthy, and therefore the gained profit of the producers is unnecessarily reduced. To overcome this, a proposed marketing scheme is the concern of the next explanation.

5-1-2 Proposed Marketing Scheme

Basically, the proposed marketing scheme will try to cut down the lengthy marketing chain and replace it with the role and functions of a cooperative in order to increase the gained profit of the producers.

With the establishment of a cooperative, the mushroom producers can sell their produce through the cooperative at a price of 100-130 bahts per kilogram or around 115 bahts on average (based on a mean calculation). Then the cooperative will sell directly to the retail business sector for 120-150 bahts per kilogram. Finally, the prices at the local markets and supermarkets are assumed to be stable at the existing prices.

The gain of the cooperative will be redistributed to all members/the producers through members' annual meetings while a certain reasonable amount of the gain will be retained by the cooperative as "retained earnings" in order to increase its working capital. By doing so, the mushroom producers will gain more profit through this proposed scheme as displayed below in Figure Y.

		Local Markets
Mushroom Producers	Cooperative	120-130B
100-130B	120-150B	Supermarkets
Avg. 115B		250B

5-2 Cost Analysis

According to various information sources (the guidebook of mushroom production, an interview with the village headwoman, results of the questionnaire...), it is found that the average cost per bag varies between 3-5 bahts or 4 bahts on average. The difference of production costs is generally caused by:

A. Different ways of using labor

For those who practice labor exchange (*Ameur*), they basically do not bear the cost of labor while those who hire labor spend approximately 1/2 baht per bag.

B. Different transportation costs

Those who use private vehicles spend about 20-30 bahts per time of buying ingredients while those who use public transport or rented pick-ups pay around 40-50 bahts per time.

From the proposed marketing scheme, with the productivity of 150-200 grams/bag/cycle (as mentioned in the guidebook), then the average earning/bag = 0.150 kg x 115 bahts/kg = 17 bahts. Therefore, if the average earning/bag is subtracted by the average production cost (4 bahts/bag), then the profit will be around 13 bahts/bag (17 bahts – 4 bahts = 13 bahts).

In comparison with the proposed marketing scheme, the existing marketing scheme shows that using the same productivity of 150-200 grams/bag/cycle, the average earning/bag = 0.150 kg x 90 bahts/kg = 13.5 bahts. Therefore, if the production cost is the same, then the average profit/bag will be around 9.5 bahts (13.5 bahts – 4 bahts = 9.5 bahts).

5-3 Expenditure-Earning Analysis

Based on the results of the questionnaire, the average expenditure/household is estimated around 2000-4000 bahts/month or about 3000 bahts/month on average. Since the period of one production cycle lasts roughly 9 months, the average expenditure/household/cycle will be 27000 bahts (this is derived from 3000 bahts x 9 months = 27000 bahts/cycle).

To fulfill that expenditure (27000 bahts/cycle), the earned income/cycle including a moderate saving rate of 15% should be around 31,765 bahts/cycle (27000 bahts : 0.85 = 31,765 bahts/cycle; 0.85 comes from the proposed saving rate of 15%).

5-4 Conclusion of Economic Analysis

From the proposed earned income, the minimum sufficient number of mushroom bags/household/cycle will be differentiated according to the failure rate of production as follows.

- Failure rate = 20% (the existing rate):
= (31,765 bahts : 13 bahts) : 0.80 = 3054 bags/household/cycle

- Failure rate = 15%:
= (31,765 bahts : 13 bahts) : 0.85 = 2875 bags/household/cycle

- Failure rate = 10%:
= (31,765 bahts : 13 bahts) : 0.90 = 2715 bags/household/cycle

- Failure rate = 5%:
= (31,765 bahts : 13 bahts) : 0.95 = 2572 bags/household/cycle

Therefore, according to the above calculation, the minimum sufficient number of mushroom bags/cycle for a household with 4-5 family members should be around 3054 bags, with an assumption that: a cooperative is set up, the market price is stable at the existing rate, and the failure rate is kept at the existing level of 20%.

Based on the existing data (the number of mushroom bags/household in 1999), as a result, the additional assistance, both technically and financially, should be given to the following:

- 21 households with 0-2500 bags as the first priority, and
- 23 households with 2501-5000 bags as the next priority.

6. Conclusion

We could say that mushroom production plays important role to Bang Pang Ma O because it is the only source of income to the villagers. Some villagers had to go to Bangkok or big city to earn money before they started mushroom production, but now they back to the village to join work. However, their income is still insufficient, so they have to expand their business.

We knew that they are facing some problems regarding mushroom production and daily lives from our investigation. The problems of mushroom production are low quantity of mushroom, low value added of mushroom and relatively low price of mushroom. They had high rate of loss mushroom because of low quality of ingredients, lack of sufficient fund to expand their production and limited water supply during summer. Mushroom needs plenty of water, but there are only three water tanks in the village and they cannot keep water sufficiently. There are no cooperatives in the village, so villagers get

information about mushroom price only from outside middlepersons and they sell it individually. Therefore the price of mushroom depends on middlepersons.

The main daily problems are insufficient infrastructure, health, education and accommodation. The road condition is so poor in the village that villagers can't move freely especially during rainy season. Under that situation, it is difficult for them to sell mushroom and contact with outsiders. Beside there are no sufficient healthcare center and secondary school in the village. The healthcare center is located in 8-9 km far from village and if villagers want to have higher treatment, they have to go the hospital, which is located in 25 km far from village. There is one secondary school in three tambons and it is located about 28km far from village. Therefore 20 children in the village have to go there by bus which is cost 300 Baht a month. This is the high burden to parents that wants their children to be educated.

7. Recommendations

Next, we would like to share some recommendations regarding the mushroom production in Ban Pang Ma O with the mushroom producers and officials from various institutions concerned. We hope that these would improve the quantity and quality of the products.

7-1 Mushroom production

1. Mushroom production techniques should be improved, in order to reduce failure rate. For example, mushroom producer should pay more attention and maintain the suitable temperature, humidity, light, and ventilation for mushrooms to grow properly. Besides, the quality of ingredients, especially the spore, is needed to be improved, to increase productivity. Also, to overcome the problem of land limitation, "shelving" method could be introduced as one of the possible alternatives.
2. Setting up a cooperative in the village is highly recommended. The cooperative will reduce the production cost through buying ingredients collectively and in large quantity. The cooperative will also be able to cut the marketing chains and increase the mushroom prices (in this case the potential opponents are middlepersons).
3. Water supply should be sufficiently available in the village, especially during dry season. In the short run, mushroom producers could provide water storage by themselves. For instance, used and clean drums can be used. In the long run, another set water tanks should be built.
4. Additional supporting fund is needed to expand mushroom production. According to village headwoman registration papers, the additional assistance should be given to: 21 households with 0-2,500 bags (first priority) and to 23 households with 2,501-5,000 bags (second priority).
5. Although recently mushroom producers are not facing selling problems of fresh mushrooms, it is recommended they have to diversify their products, in order to increase the value added and business sustainability in the long run.

To facilitate the achievement of all the recommended points, we think that some necessary supporting conditions are needed as follows.

7-2 Supporting conditions

1. Certificate of land utilization in the village should be issued to the villagers, because it will make them feel secure and guarantee them to produce in the long run.

2. Road condition in the village should be improved. It will support production and distribution activities.
3. Environmental awareness should be promoted among villagers. For example, they should tear the used plastic bags and collect them in one place. If they just simply throw the used plastic bags away around houses, especially the unsuccessful bags, in the near future it will make environmental problem to the village. They should intensify the utilization of production waste. For instance, by reusing or selling it as fertilizer.

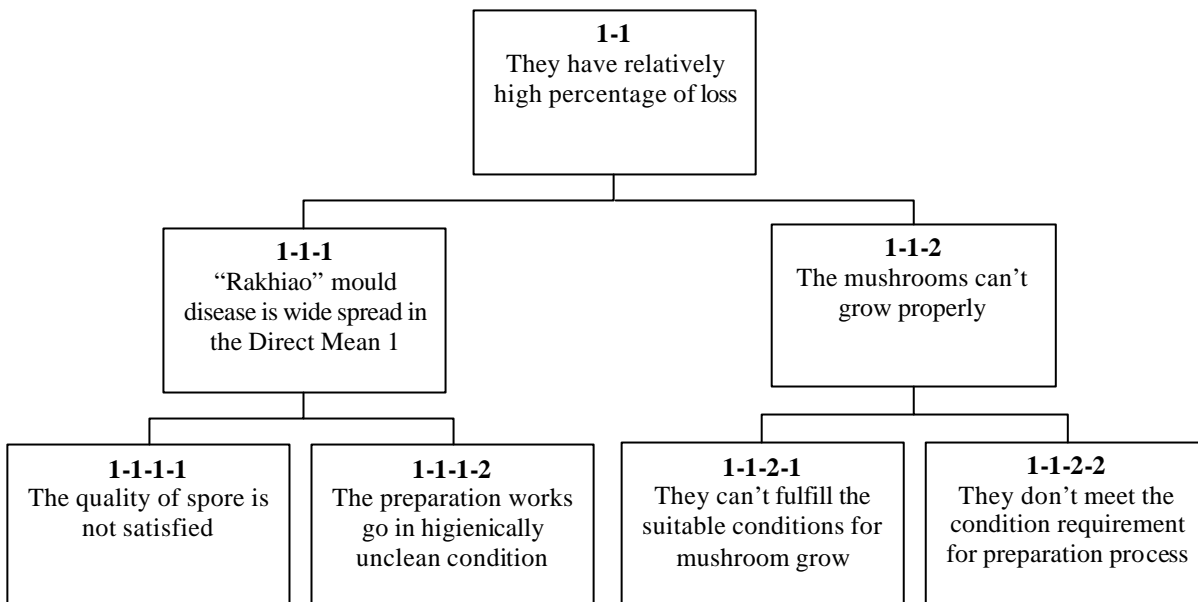
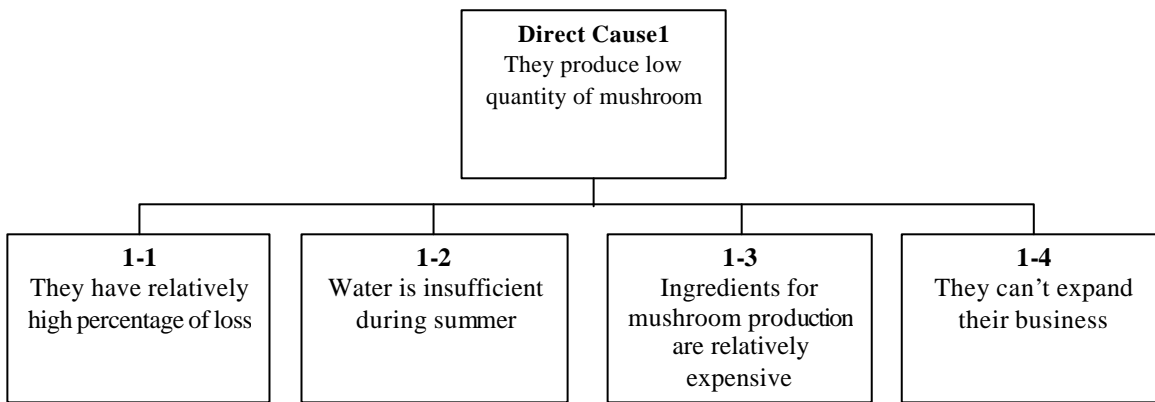
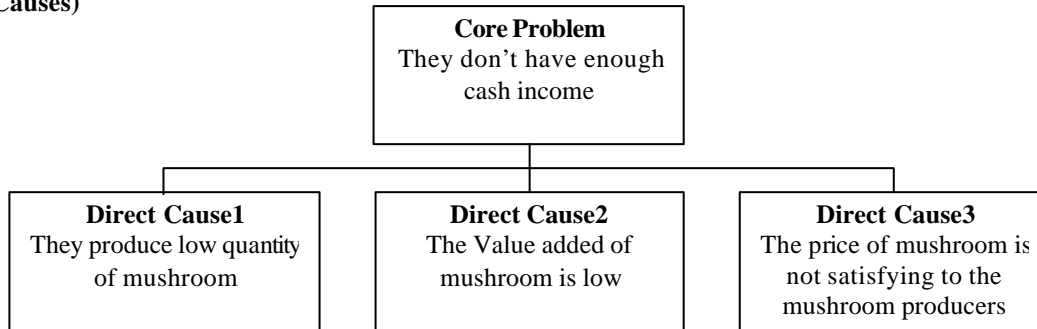
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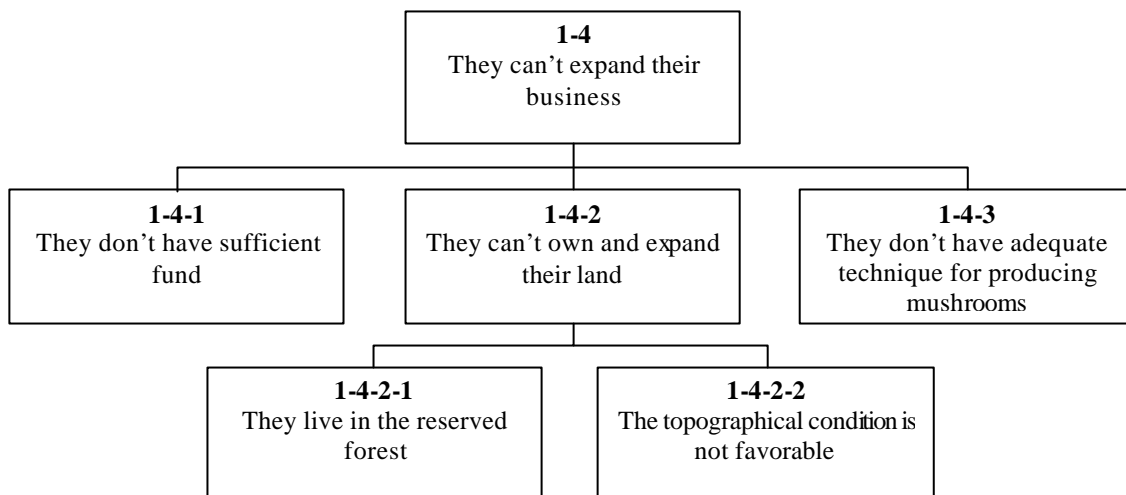
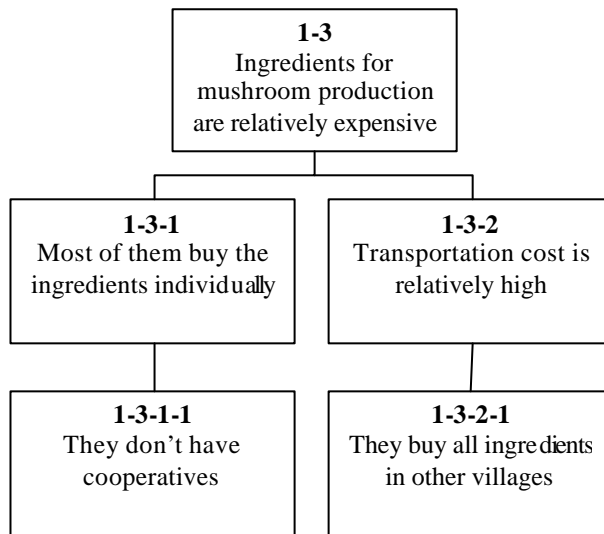
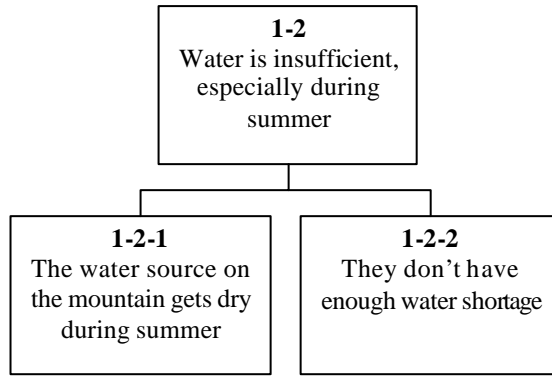
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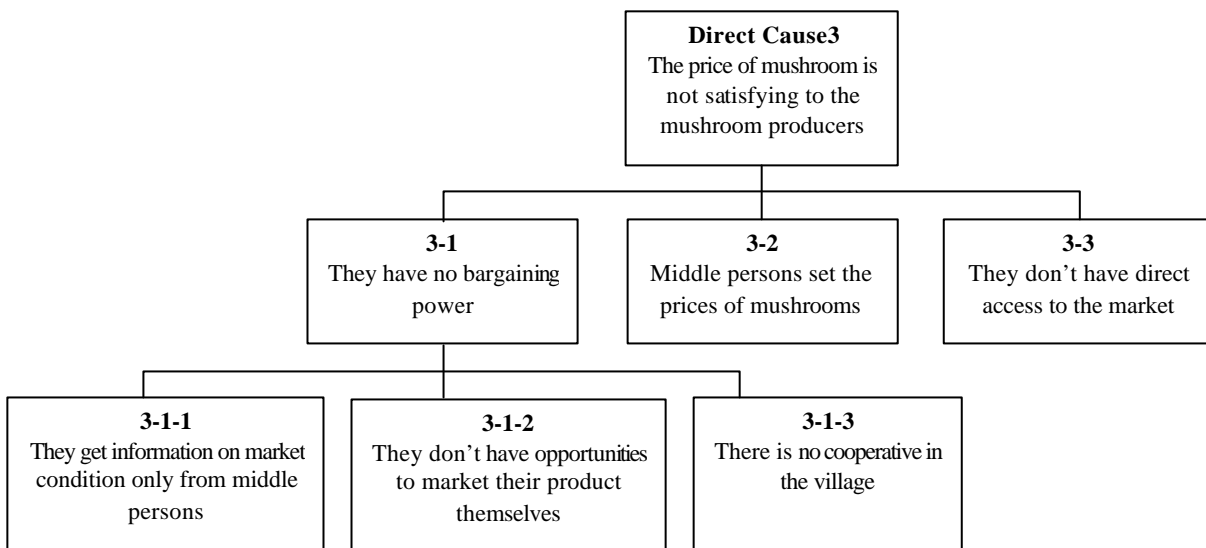
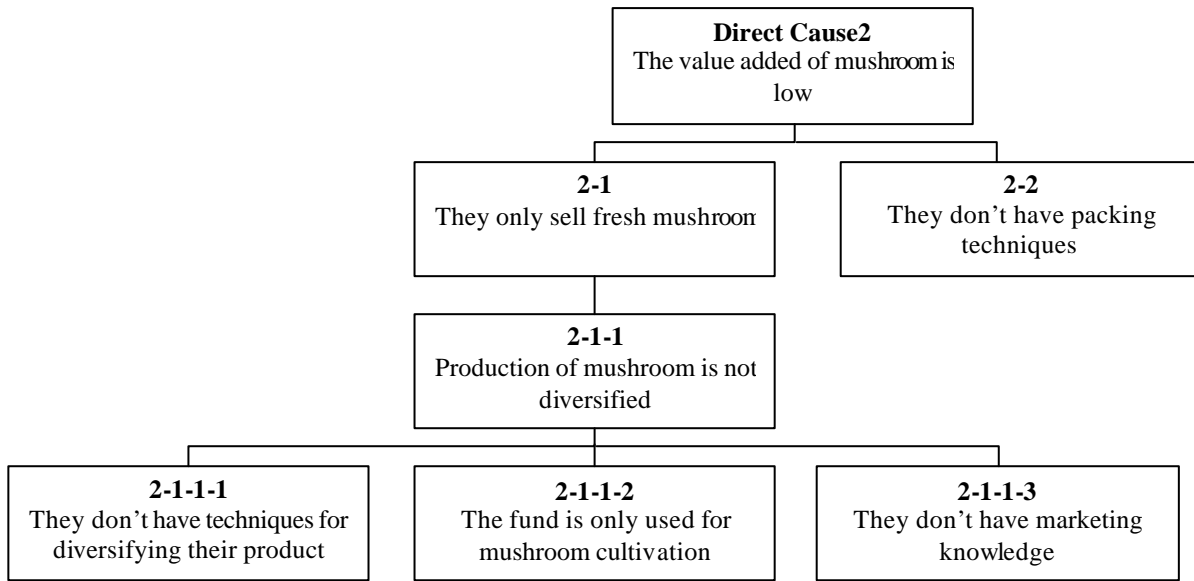
Appendix

Problem Analysis Tree

(Causes)

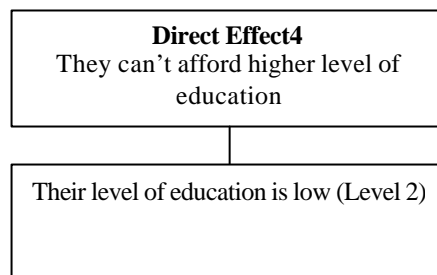
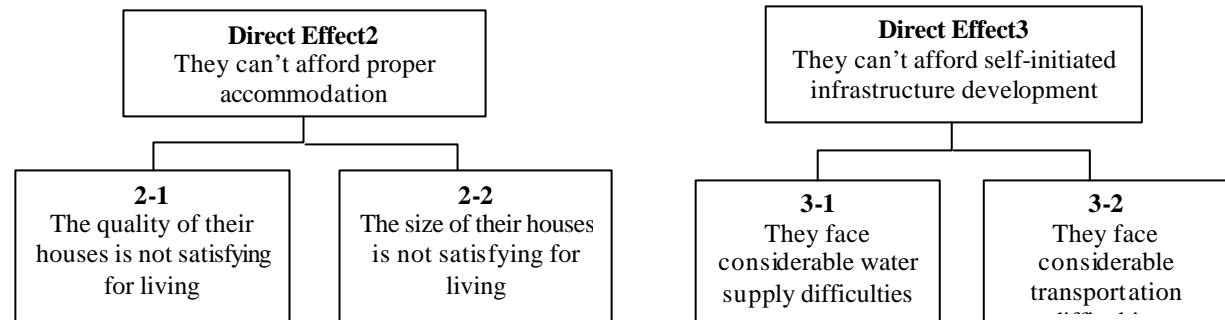
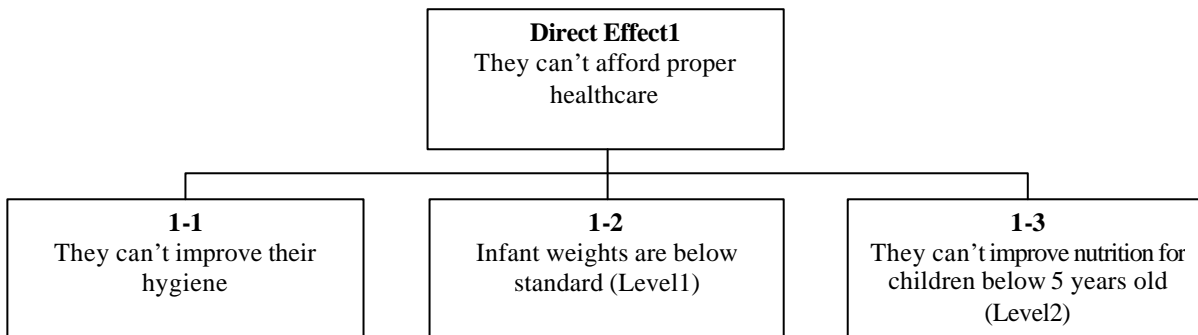
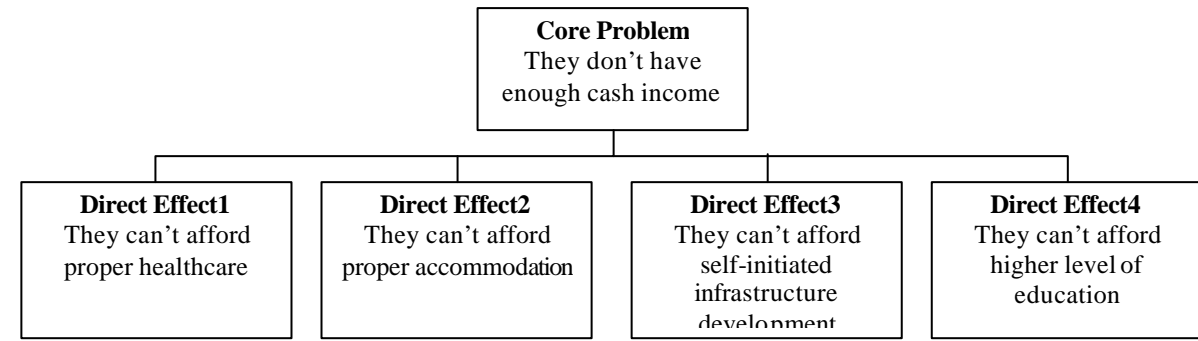






Problem Analysis Tree

(Effects)



Objective Analysis Tree

