

**THE STUDY OF ROLE ON COMMUNITY ENVIRONMENTAL
MANAGEMENT OF COMMUNITY HOUSINGS' AUTHORITIES
IN BANGKOK**



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IN BANGKOK



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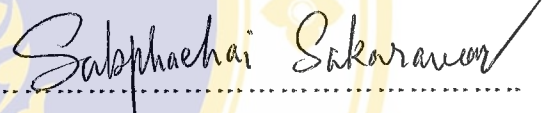
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THE STUDY OF ROLE ON COMMUNITY ENVIRONMENTAL
MANAGEMENT OF COMMUNITY HOUSINGS' AUTHORITIES IN BANGKOK

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ABSTRACT

This research has an objective to study the role of community housing's authorities in environmental management. These are in the area of knowledge-giving, coordination, and leadership. The study compares the independent variables, i.e. age, educational level, job service time, size of community housing, information receipt, as well as level of the role in environmental management in 3 areas. They also include problems, obstacles, and recommendations in regards to the role in community environmental management. The samples are those community housing's authorities at the level of head department and assistant in the Bangkok area for a total of 19 communities. The questionnaire and in-depth interview are used as research tool. Data analysis is done by SPSS program. The statistics in use are percentage, means, highest value, lowest value, and standard deviation.

The research result shows that the community housing's authorities have the role of community environmental management in knowledge dissemination, coordination, and leadership at a medium level. The variable having relationship with this role is information receipt on environment. Variables having no relationship with this role are age, educational level, job service time, and size of community housing, with statistically significant result at 0.05. Problems and obstacles in community environmental management are due to the lack of cooperation and coordination with related units and community residents. As well, the budget for environmental supervision is limited.

Recommendations are that community housing's authorities should coordinate with the District Office to manage staff for rubbish collection so that there is no left-over rubbish. They should also take care of the budget and materials support by National Housing in order to be adequate for environmental supervision in the community. There should also be campaign activity for residents to participate in environmental supervision within their own community on a continuous basis. There should also be an evaluation after the campaign on a constant basis.

KEY WORDS: ROLE/ ENVIRONMENTAL MANAGEMENT/ COMMUNITY'S
HOUSING/ NATIONAL HOUSING

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การศึกษบทบาทด้านการจัดการสิ่งแวดล้อมชุมชนของเจ้าหน้าที่สำนักงานเคหะชุมชนในเขต
กรุงเทพมหานคร (THE STUDY OF ROLE ON COMMUNITY ENVIRONMENTAL
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บทคัดย่อ

การวิจัยครั้งนี้ มีวัตถุประสงค์เพื่อศึกษบทบาทของเจ้าหน้าที่สำนักงานเคหะชุมชนในการจัดการ
สิ่งแวดล้อมชุมชน ด้านการให้ความรู้ , การประสานงาน และการเป็นผู้นำโดยพิจารณาเปรียบเทียบกับ
ตัวแปรที่แตกต่างกันในด้าน อายุ , ระดับการศึกษา , อายุงาน , ขนาดของเคหะ ชุมชน , การรับรู้ข้อมูล
ข่าวสารรวมถึงระดับของบทบาทด้านการจัดการสิ่งแวดล้อมชุมชนทั้ง 3 ด้าน ตลอดจนถึงปัญหา ,
อุปสรรคและข้อเสนอแนะเกี่ยวกับบทบาทในการจัดการสิ่งแวดล้อมชุมชน โดยศึกษาเจ้าหน้าที่สำนักงาน
เคหะชุมชนระดับหัวหน้าและผู้ช่วยของสำนักงานเคหะชุมชนในเขตกรุงเทพฯ ทั้งหมดรวม 19 ชุมชน โดย
ใช้แบบสอบถามและแบบสัมภาษณ์เชิงลึกเป็นเครื่องมือวิจัย วิเคราะห์ข้อมูลด้วยโปรแกรมสำเร็จรูป สถิติ
ที่ใช้คือ ค่าร้อยละ,ค่าเฉลี่ย,ค่าสูงสุด,ค่าต่ำสุดและ ส่วนเบี่ยงเบนมาตรฐาน

ผลการวิจัยพบว่าเจ้าหน้าที่เคหะชุมชนมีบทบาทด้านการจัดการสิ่งแวดล้อมชุมชนในด้านการเผยแพร่
ความรู้,การประสานงานและการเป็นผู้นำในชุมชนในระดับปานกลาง ตัวแปรที่มีความสัมพันธ์กับบท
บาทคือ การได้รับข้อมูลข่าวสารด้านสิ่งแวดล้อม ตัวแปรที่ไม่มีความสัมพันธ์กับ บทบาทคือ อายุ,ระดับ
การศึกษา,อายุงานและขนาดของเคหะชุมชน อย่างมีนัยสำคัญทางสถิติ 0.05 ปัญหาอุปสรรคในการจัดการ
สิ่งแวดล้อมชุมชนเนื่องจาก ขาดความร่วมมือและประสานงานกันกับหน่วยงานที่เกี่ยวข้องและชาวชุมชน
ตลอดจนงบประมาณที่ใช้ในการดูแลสภาพแวดล้อมมีจำกัด

ข้อเสนอแนะ คือ เจ้าหน้าที่สำนักงานเคหะชุมชนควรประสานความร่วมมือกับทางสำนักงานเขตเพื่อ
ดำเนินการจัดเจ้าหน้าที่เข้ามาจัดเก็บขยะไม่ให้ตกค้าง และดำเนินการของงบประมาณและวัสดุอุปกรณ์
สนับสนุนจากทางการเคหะแห่งชาติให้เพียงพอกับการดูแลสภาพแวดล้อมทั่วไปใน ชุมชน นอกจากนี้ควร
จัดกิจกรรมรณรงค์ให้ชาวชุมชนมีส่วนร่วมในการดูแลสิ่งแวดล้อมภายในชุมชนของตนอย่างต่อเนื่อง และ
คอยประเมินผลงานภายหลังการจัดกิจกรรมรณรงค์อยู่เสมอ

CONTENTS

	Page
ACKNOWLEDGEMENTS	iii
ABSTRACT (ENGLISH)	iv
ABSTRACT (THAI)	v
LIST OF TABLES	viii
LIST OF CHARTS	xi
CHAPTER 1 INTRODUCTION	1
1.1 Background and significance of problems	1
1.2 Research objectives	8
1.3 Research questions	8
1.4 Research scopes	9
1.5 Research hypothesis	9
1.6 Conceptual framework for the research	10
1.7 Research definitions	11
1.8 Expected benefits	12
CHAPTER 2 RELATED RESEARCH LITERATURE	13
2.1 Related research literature	13
2.2 Concepts on dissemination of knowledge, coordination, and leadership	19
2.3 Roles in community administration of the community housing officers	25
2.4 Concepts and policy on community environmental management	34
2.5 Guidelines on community environmental management in Bangkok	38
2.6 Researches and variables which involved the research	44

CONTENTS (cont.)

	Page
CHAPTER 3 RESEARCH METHODOLOGY	51
3.1 Population and random sampling	51
3.2 Research tool	53
3.3 Research creation	55
3.4 Data collection	56
3.5 Data analysis	56
CHAPTER 4 RESEARCH RESULT	58
4.1 General features of samples	59
4.2 Level of role in community environmental management	63
4.3 An analysis on comparison the differences between variables and role in community environmental management	77
4.4 Information on problems and obstacles occurred, opinion, and way to deal with problems, as well as general suggestions	85
CHAPTER 5 DISCUSSION ON RESEARCH RESULTS	90
CHAPTER 6 SUMMARY AND RECOMMENDATIONS	94
6.1 Summary of research result	94
6.2 Problems and obstacles in community environmental management	96
6.3 Recommendations	98
6.4 Recommendation for future research	101
BIBLIOGRAPHY	102
Appendix	107
Questionnaire example	108
The Photo showing the environment problem in the community	120
BIOGRAPHY	124

LIST OF TABLES

Table		Page
1	Community housing namelist ,number of population and sample group	52
2	Numbers, percentage of samples as per age	59
3	Numbers and percentage of samples as per educational level	59
4	Numbers and percentage of samples as per job service time	60
5	Numbers and percentage of samples as per size of community	60
6	Numbers and percentage of frequency in information receipt of sample as per source of information	61
7	Numbers and percentage of level information receipt	62
8	Numbers and percentage in knowledge dissemination in community environmental management as per each item	63
9	Numbers and percentages in relation to the coordination for community environmental management as per each item	68
10	Numbers and percentages on leadership in community environmental management as per each item	71
11	Level of role in knowledge dissemination for community environmental management of community housings' authorities	76
12	Level of role in coordination for community environmental management of community housings' authorities	76
13	Level of role in leadership for community environmental management of community housings' authorities	77
14	Comparison the differences between age and role of the authorities in knowledge dissemination in community environmental management	77

LIST OF TABLES (cont.)

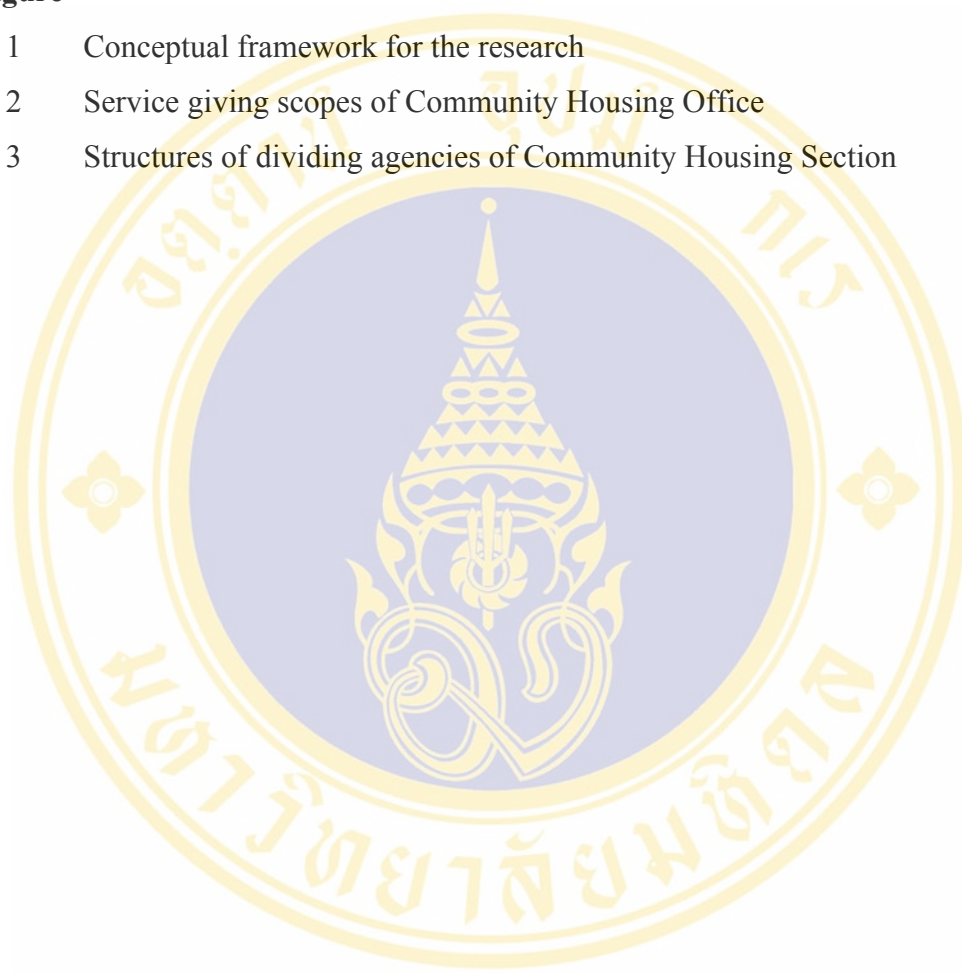
Table		Page
15	Comparison the differences between educational level and role of the authorities in knowledge dissemination in community environmental management	78
16	Comparison the differences between job service time and role of the authorities in knowledge dissemination in community environmental management	78
17	Comparison the differences between size of community and role of the authorities in knowledge dissemination in community environmental management	79
18	Comparison the differences between information receipt and role of the authorities in knowledge dissemination in community environmental management	79
19	Comparison the differences between age and role of the authorities in coordination in community environmental management	80
20	Comparison the differences between educational level and role of the authorities in coordination in community environmental management	80
21	Comparison the differences between job service time and role of the authorities in coordination in community environmental management	81
22	Comparison the differences between size of community and role of the authorities in coordination in community environmental management	81
23	Comparison the differences between information receipt and role of the authorities in coordination in community environmental management	82

LIST OF TABLES (cont.)

Table		Page
24	Comparison the differences between age and role of the authorities in leadership in community environmental management	82
25	Comparison the differences between educational level and role of the authorities in leadership in community environmental management	83
26	Comparison the differences between job service time and role of the authorities in leadership in community environmental management	83
27	Comparison the differences between size of community and role of the authorities in leadership in community environmental management	84
28	Comparison the differences between information receipt and role of the authorities in leadership in community environmental management	84

LIST OF CHARTS

Figure		Page
1	Conceptual framework for the research	10
2	Service giving scopes of Community Housing Office	30
3	Structures of dividing agencies of Community Housing Section	32



CHAPTER 1

INTRODUCTION

1.1 Background and significance of problems

Bangkok was rapidly and continuously growing in population, economy, and society. At present, Bangkok became a big city of the world and had the same characteristic as the big city of other developing countries. The important factor of the city expansion stemmed from migration of rural people to find work in the city. So, need for residence increased at all time. Growth in this characteristic and economic and industrial growth made the land price of Bangkok be more expensive. This made population and labor densely stay near the working place where there were cheap residences. But the area per unit was narrow and crowded. Sanitation and environment around residences were substandard.

Environment situation report making project according to operation plan 21 (1997:3/22) forecast that ration of urban population to rural population in Thailand increased from 35:65 to 70:30 by 2025 or next 20 years. At present, the problem on the crowded community could not be solved.

Moreover, important problems of the city expansion were problem on the crowded community, expelling and demolition due to expropriation, vacant space invasion, homeless people (vagabonds and communities under the bridge). These were problems on residence in the city, which caused various problems to development of the city. For example, the government had of increase budget on poverty management and provision of land and residence. It might be said that the crowded community was the centre of various social problem which were severer and caused damage to the country and society.

After seriously realizing such problem, the government, therefore, established National Housing Authority according to Revolution Group Notification no.316 date February 12, 1973 as the state enterprise under the responsibility of Human Security and Society Development Ministry Separated from Interior Ministry by transferring

some work and start from Department of Public Welfare, Government Housing Bank, and Community Improvement Office of Bangkok Municipality National Housing Authority had roles in giving convenience and coordinating the social development process. Moreover, National Housing Authority was the main organization in Thailand, which had roles in developing and encouraging residence security of people having little and moderate income, developing the city for upgrading people's quality of life by making the community and society suitable for living, and encouraging the society to help each other.

Apart from having the responsibilities to develop people's residence and supervise to develop people's residence and supervise construction of residences in various models both in Bangkok and other provinces. Moreover, National Housing Authority developed residences of people in the crowded community, implemented according to the official housing project, administered the community housing to have good environment, and developed the city.

After being established for 31 years, National Housing Authority had developed residences for people having little and moderate income according to the government policy from the past to the present time National Housing Authority tally developed 425, 181 residence units and solved the problem on the crowded community in Bangkok and other provinces (From the report of the 31st anniversary or National Housing Authority, Information in September, 2003). This showed that National Housing Authority had to be responsible for a lot of various community housings both in Bangkok and other provinces. So, it was difficult for National Housing Authority to thoroughly supervise the community housing. As each community housing was diffusely located all over the country, it was necessary of set up a sub-agency in each community housing for being able to close and quickly administer work in the community. Such sub-agency was Community Housing Office.

National Housing Authority continuously implemented the policy and work plan for 31 years. As National Housing Authority had to plan about management of residences for a lot of people, it was difficult to meet of all people. And poor people could not easily and really possess residences due to several factors such as economic decline. There fore, National Housing Authority Continuously expanded various

projects in Bangkok and the nearby provinces for carrying need for residences of people having little income.

According to the study of roles in development of residences of National Housing Authority and the private sector of Academic Service Office, Chulalongkorn University (1997: 4-1), the researcher found that development of residence of National Housing Authority in the long period, related agencies had to develop working ability to have more efficiency. As National Housing Authority was directly responsible for determination of policy and construction of residences, the policy determinists could not clearly determine policy. Moreover, relation with other sub-agencies or organizations on cooperation for development of residence work system was not clear. So, implementation was slow. And there was no agency to be responsible for the implementation. This continuously impacted on quality of life and environment of community residents. After observing the community housing, the researcher found that the living condition of community was not good enough. The community housing which was established for a long time had the same condition as the crowded community. Environment in the community housing was neglected. There was a lot of rubbish outside the rubbish bin. Some people discarded some rubbish from the upper part of the community housing. Such rubbish was diffusely smelly. This caused had image. Some community housing faced the problem on the blocked drain which subsequently caused wastewater. This was because some shops poured water without straining leftovers. While some shops strained leftovers but did not discard the leftovers which overflowed the sieve. This blocked the drain and caused wastewater. Therefore, the researcher thought that there should be measures to manage such problems in order to lessen the problem.

Although Community Housing Office supervised the community housing but, sometimes, it did not receive cooperation on coordination with various agencies which involved supervision of that community housing. These agencies were not responsible for the problems which occurred in that community housing. After studying, the service improvement project of National Housing Authority, the researcher found that community housing due to several limitations. And National Housing Authority had new policy to make the community residents increasingly responsible for the living environment. Apart from receiving help from Community

Housing Office, every community resident had to give cooperation in making the community housing have good living environment. A group of people who had important roles in coordinating community residents to jointly supervise their community housing were community committee who were the representatives of community residents and had duties to preserve and manage various things on public utility and environment of the community. Moreover, community committee had to inform various problems to Community Housing Office or related agencies such as the district office which was responsible for that community housing so that such agencies could help solve various problem of the community housing.

Most community committee elected by community residents had different occupations, age experience and education. So, they had different knowledge and understanding on working in the community housing. As they had to be responsible for main work, they had no time to meet for consulting about problem of community residents. Therefore, administration in the community tended to face problems and obstacles. After studying Thonburi Community Housing the researcher found that when people had problems they would inform Community Housing Office about problems without informing community committee. This was because community residents still trusted the agency of National Housing Authority approved by the government rather than community committee who were neighbors living in the same flat. Community residents wanted to quickly solve problems in their community so they directly informed Community Housing Office. This might delay the main policy of National Housing Authority which allowed community residents to supervise themselves.

After studying future community housing administration (1995 : 1-3), the researcher found that Community Housing Office faced various working problems such as problems on budget, staff slow working steps, coordination, control, unclear responsibilities, community disorder, residents quality, residents complain and dissatisfaction, smelly rubbish, blocked drain, flood, insufficient green area, bad environment. These were some parts of the problems. As Community Housing Office had to work with a lot of people, it had to easily face problems.

Therefore, the researcher had to study and find the information on various problems, especially the environmental problems. After finding basic information and

studying the information of Punnapha Kraisin (1993 : 182-189), the researcher found that the problems on community environmental management stemmed from unsuitability of design planning management, and supervision as follows,

The problem on waste management

At present, rubbish quantity in each community housing considerably increased. After asking the community housing offices, the researcher found that rubbish quantity depended on population density and community housing sizes. There was rubbish quantity about 1.5-5 tons per day in each community housing. After surveying the community housing the researcher found that there were a lot of rubbish piles in the vacant area behind the building or beside the rubbish bin. Such smelly rubbish considerably disturbed residents living downstairs. This was because rubbish bins were put at the back of the building only. The capacity volume of the rubbish bin was rather narrow so people could generally see rubbish overflow the rubbish bin if dustmen did not collect rubbish in the suitable time. Some community housing bought a rubbish container with the capacity of 8 cubic meters for each building. However, the community did not discard rubbish in the rubbish bin. This was because each community housing was a long building so community residents were not convenient to walk to discard in the rubbish bin. Moreover, Thonburi Community Housing Office faced another problem. Community Housing Office put several 240-litre rubbish bins at various points. So, the community housing was full of yellow bins in front of the parking building. Some rubbish waiting for collection of dustmen overflowed some points where people frequently passed by. This caused bad image. Later, such agency bought more rubbish containers with the capacity of 8 cubic meters. After surveying the community housing again, the researcher found that rubbish containers were not used. And after asking the community housing office, the researcher knew that Bangkhunthian District office could not implement anything due to insufficient dustcarts.

Moreover, rubbish collection was not efficient. Dustmen did not collect rubbish in the specified time. Therefore, the community housing officers should realize problems and find problem-solving methods.

The problem on sewage water, wastewater

At present, National Housing Authority totally established 13 wastewater treatment centre supervised by Bangkok Metropolitan. In the near future, the residence building, working places, and various factories in Bangkok would also use the central wastewater treatment system. Now, the wastewater treatment system of each community housing still ordinarily implemented. After surveying, the researcher found that several community housings did not face the problem on the wastewater treatment system. Some community housing faced the problem on the system equipment. For example, the air filling machine and the pump motor which were used for 20-30 years had been repaired but there was a problem on old spare parts. Sometimes, the community housing had to ask permission to buy new machines by using a lot of budgets.

Discarding leftovers and rubbish by community residents caused blockage of the drain and a smell. Moreover, it was the place where mosquitoes bred and carried some diseases. The researcher found that general shops and food shops caused such problem. And there was no good management system in the market of the community. Moreover, the community housing officers could not solve such problem. After cooking food or washing dishes, several food shops discarded leftovers into the drain without using the sieve and the flat trapping bin.

Moreover, community residents liked to discard leftovers and rubbish in the drain, bathroom, wash-basin, or toilet. This caused blockage of drainpipes in the building. If sewage water was not suitably drained, it would become wastewater. This made the wastewater treatment system work harder.

The problem on green area

Various community housings in Bangkok and the nearby provinces were linked by roads and walkways. There were trees on both sides of road. There were few walkways. There was no freshness from the trees. There was only shadow casting from a building to another building. There were few parks in the community housings when compared with number of residents. According to standard of National Housing Authority, there should be 1-rai park per 500 people. Some community housing such as Lak Si Community Housing had open space full of long grass in front of the

community housing. But such community housing did not develop such open space as a small park or areas which could be utilized for other purposes.

Several community housings well developed and supervised sports field and playground. While few community housings had insufficient areas used for exercising or playing sports.

According to such 3 problems and the study of future community housing administration (1995: 29-32), the researcher could analyse that most environmental problems were caused by community residents. The community housing officers mostly perceived problems which occurred. And they continuously coordinated and solved problems in the community. Community committee also participated in solving problem. As for administration for solving community problems, factors which involved problem-solving process were thought and realization of preservation of environment in the community by community residents roles in community environmental management of the community housing officers on skills of disseminating knowledge community residents realize environmental problems, roles in quick coordination and continuous following, and roles in being good leaders to manage the problems. As work characteristics of the community housing officers were diversified, implementation of each position had different administration methods and process. Therefore, determination of position and manpower of each community housing office was different according to community environment and size. Generally, there were 3 working lines such as community order arrangement and property management work, service giving work, and development work. Actually, the community housing officers mainly emphasized community order arrangement and property management work. While, some community housing combined service work and development work to be the same unit. As for the study of management of community environment problems, the researcher had to study roles of community housing officers, especially community housing chiefs and assistant chiefs who could perceive various problems which occurred in the community and had important roles in solving various problems. This was because such chiefs and assistant chiefs had to coordinate communication of various information on dissemination of knowledge and management of environment in the community among community residents and between community residents and related agencies. As for this study, the researcher

specifically studied roles of chiefs and assistant chiefs who were representatives of community residents. The researcher thought that the researcher studied the information which was the information of all community residents. This was because the researcher wanted to bring the research results to analyse that which factors caused a change in roles in community environmental management of the community housing officers or caused administration efficiency which was not consistent with the specified roles. The researcher used the research results and recommendations of the community housing officers as the guidelines for working and solving problems which might occur in the future.

1.2 Research objectives

1. To study community housing officers' roles in community environmental management on dissemination of knowledge, coordination, and leadership by comparing with different variables on age, educational level, working duration, size of the community housing, and receipt of information on community environmental management.
2. To study the level of community housing officers' role in community environmental management on dissemination of knowledge, coordination and leadership.
3. To study problems, obstacles, and recommendations on the community housing officers' roles in community environmental management.

1.3 Research questions

1. How did difference of variables such as age, educational level, working duration, size of community housing and receipt of information on community environmental management affect the community housing officers roles in community environmental management?
2. How often did community housing officers express roles in community environmental management on dissemination of knowledge, coordination, and leadership?

3. What problems, obstacles, opinion, and recommendation on roles in community environmental management did the community housing officers have?

1.4 Research scopes

1. As for this research, the researcher specifically studied roles in community environmental management of 38 people who were chiefs and assistant chiefs of 19 Community Housing Offices in Bangkok.

2. As for this research, the researcher specifically studied 19 communities supervised by Community Housing Office in Bangkok. Community Housing Office was mainly responsible for flats, shophouses, single housing, townhouse, and vacant land.

1.5 Research hypothesis

The researcher set the statistic significant testing hypothesis at the level of 0.05.

1. Community housing officers' roles in community environmental management such as dissemination of knowledge, coordination in the community and leadership were different according to age, educational level, working duration, size of the community housing and receipt of information on community environmental management.

2. Roles in community environmental management of the community housing officers such as dissemination of knowledge, coordination, and leadership were in the moderate level.

1.6 Conceptual framework for the research

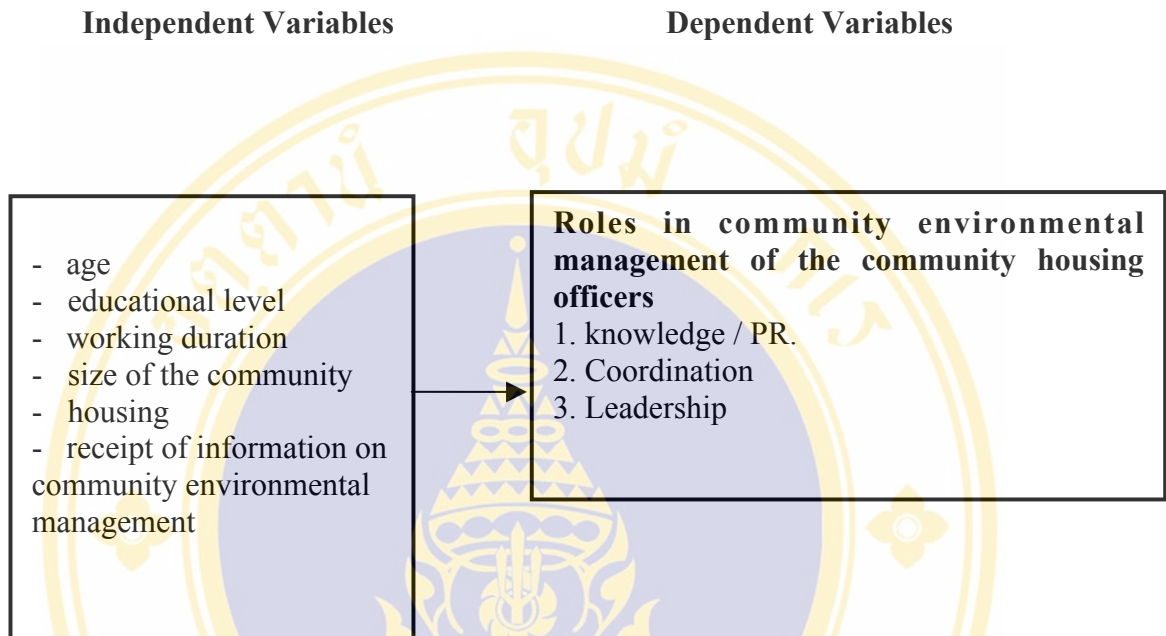


Chart 1 Conceptual framework for the research

1.7 Research definitions

Role meant a person's action or behavioral expression according to the specified duties, which had to be accepted by the society.

Community environmental management meant management of various environments in the community housing such as rubbish management, wastewater-sewage water management, and green area management in order to make environment in the community beautiful and clean.

Rubbish management meant guidelines on management of problem on collecting rubbish and keeping cleanliness in the community by quickly removing rubbish from the community.

Wastewater-sewage water management meant provision of the suitable draining system for hygienically draining all sewage water in order to prevent a smell of the system. But, there should not be blockage of the drain. Water had to be quickly and efficiently drained.

Green area management meant management of open space of the community housing such as parks, sports field, playground for relaxation of community residents.

Roles in community environmental management of the community housing officers meant duty performance of the community housing officers on dissemination of knowledge on management of environment in the community to have suitability for living, cleanliness, and order and creation of good quality of life in the community. The community housing officers had to coordinate, lead, or stimulate community residents to have participation and correctly performed duties.

Community Housing Office meant the agency which directly reported to Community Housing Section, was the representative of National Housing Authority and was situated in various community housing of National Housing Authority.

Community Housing Officers meant officers working in various Community Housing Officers. Such officers had duties to administer and manage community properties and solve various problems which occurred in the community. Initially they

had important roles in creating the community housing as the community for a period of time before transferring such responsibility to local agencies or other related agencies and community residents.

Community committee meant community organization appointed by Community Housing Office or elected by community residents to be the representative of the community. Community committee had important roles in inducing community residents to implement various activities of the community, solve various problems which occurred in the community, present the work plan, and coordinate with the community housing officers.

Community housing meant residence of community residents supervised by National Housing Authority. Such residence comprised houses and residence building in various models.

Size of the community housing Number of building of flats within each community housing, single house, townhouse, shophouse and the land which could be calculated as number of building or units were divided into 3 size for this research as follow;

1. Small – size, community comprised 1-10 buildings or not over 500 units and number of population not over 2,500 people
2. Medium – size, community comprised 11-25 buildings or not over 6,000 units and number of population not over 10,000 people
3. Large – size, community comprised over 25 buildings or over 6,000 units and number of population not over 30,000 people

1.8 Expected benefits

1. The research results would be a guideline for other community to manage environment.
2. The research results could help upgrade quality of life of community residents.
3. The research results would be a guideline for the community housing officers to improve environment of residences in the community housing in order to make residents have better quality of life under efficient environment management such as rubbish problem management, wastewater-sewage management, and green area management.

CHAPTER 2

RELATED RESEARCH LITERATURE

The researcher studied documents and research reports which involved the study of roles in community environmental management of community housing officers in Bangkok for being a base and a guideline for this research. There were 6 important issues as follows;

- 2.1 Concepts and knowledge on roles
- 2.2 Concepts on dissemination of knowledge, coordination, and leadership
- 2.3 Roles in community administration of the community housing officers
- 2.4 Concepts and policy on community environment management
- 2.5 Guidelines on community housing environmental management in Bangkok
- 2.6 Researches and variables which involved the research

2.1 Concepts and knowledge on roles

2.1.1 Meaning of role

The Royal Institute Dictionary in 1982 (1995:495) explained that role meant performance of the specified such as roles of parents, roles of teachers

Sucha and Surang Jan-em (1987:46) explained that role meant action which should be done by people in various status. When the society determined people's right, duty, and status, people in that status had to perform the specified duty.

The research reports of people who received the training on the social-sciences researcher curriculum No. 53 (1999:18) explained concepts and theories which involved role and defined that role meant behavioural expression according to position and status determined by the organization. If that role was consistent with interest, need, and experience, people would accept and express the role according to expectation of the society or their perception and expectation.

Thepphanom Muangman and swing suwan (1987:71) said that Role Behaviour was response of duty to role or work condition and had influence on the meaning of role determinists. Role behaviour really done by people might not be consistent with expectation of those people and role determinists.

Princition, Joy and et.,al. (1973:260) said that role was behaviour which people expressed according to their duties and expectation of other related people by depending on the conception of people who expressed behaviour and results of interaction with other people.

Somyos Naweeearn (1983:13) said that role was behavioural models. Scopes of these roles were formally determined in the job description and policy. Role scopes might be informally understood.

Phanthip Athipanjaphong (2000:20) concluded that role meant action or behavioural expression according to duties and responsibility of people and expectation of involved people under the social situation by involving interaction in order to make people perform the suitable duty.

According to the above meanings of role, the researcher would like to conclude that role meant duties or responsibility which should be performed by people for responding to the society and expectation of other people in order to bring about benefits to the society.

2.1.2 Role categories

Narunan Suriyamanee (1994:43 - 43) divided role categories into 4 categories as follows;

2.1.2.1 Sex roles

Sex roles were very important in the Thai society because most adults did not sufficiently understand such roles. Freud thought that motives which made people do various things were caused by sexual desire. Sex roles began from birth. Nobody avoided sex roles. So, parents should teach their children to suitably express roles according to traditions of the society.

2.1.2.2 Kinship Roles

Every human had family status. For example, children had children roles. When children became adults, they might be father, mother, aunt, uncle. In the Thai society, kinship roles had very close relation among people who knew, loved, liked one another.

2.1.2.3 Social roles

Social roles were roles or duties determined by the society for people in various status to use as practical guidelines by having cultural norms as the decision criteria. When anybody did not follow such roles or duties, he would be compelled or punished.

2.1.2.4 Occupational Roles

Role expressers had to think of scopes and important principles of that occupation which determined role expression of people.

Linton (1945) (Cited in Virach Jiambanjong 1980:109) said that, in a society, people used role behaviour as a guideline for treating other people. Role behaviour might be different if that position was different. And position role could be divided into 5 roles as follows;

1. Age-sex role such as roles of men, women, children, adults. These roles influenced people's behaviours at all times.
2. Occupational role. People could change this role more independently than other roles such as roles of teachers, roles of sellers.
3. Prestige role such as roles of chiefs, roles of subordinates.
4. Family role such as roles of mother, roles of subordinates.
5. Association group based on congeniality role such as roles of members in various clubs.

2.1.3 Elements and factors which influenced role expression

Broom and Selznick (1973:36) said that role element comprised 3 characteristics as follows;

1. The socially prescribed or ideal role was the ideal role which determined right and duty according to social positions.

2. The perceived role was a role which each person believed that he should do according to the received position. Such role might not be similar to the ideal role. Each person might have different perceived role.

3. The performance role was a role really done by people by depending on belief, expectation, perception of each person, pressure and opportunity in each society in a period of time, personality and experience of each person.

Allport (1973:188) said that role in the characteristic of the role expression process depended on 4 elements of factors as follows;

1. Role expectation was a role according to expectation of other people or a role which the institute, organization, or social group expected people to express according to people's right and duty.

2. Role conception. As for this factor, people saw Perceived Role which involved needs or expectation of those people. Role perception and expectation of people depended on personal basic characteristics, life goals. And values of people who possessed that role. Role conception according to this concept meant role perception and role expectation which had mutual relation.

3. Role Acceptance could occur when there was consistency of roles expected by the society (Ideal Role), role perception, and role expectation. Role acceptance involved understanding on role and communication between the society and those people. People were not always willing to accept every role although they were selected or forced by the society to receive the position and had duty to follow the roles. If the received roles caused damage and loss of benefits of those people, those people would try to avoid those roles by not accepting those roles.

4. Role performance was actual role of status owners who might express roles according to expectation of the society or their perception and expectation. Good performance of duty depended on people's role acceptance level.

Such concept of Allport believed that factors which most influenced actual role were role perception and role expectation.

Moreover, Phaiboon Changrian (1973:30) said that factors which affected people's role expression would be different according to habit characteristics, knowledge and ability, motives. Motives might stem from personal interest, information receipt, training or the situation at that time.

Thasana Bunthong (1981:95) gave the concept on factors which influenced role expression that people expressed their roles according to duties expected by the society. Suitable role expression depended on the following important factors;

1. Understanding on their roles.
2. Experiences of people who had to express their roles.
3. Personality of people who expressed those roles.

2.1.4 Problems which involved roles

Pha-ob Namart (1983:43) said that there were 3 problems which stemmed from roles as follows;

1. Role impairment despite clear and steady determination of roles. If people had to express roles which they did not clearly understand, such role expression would cause damage and impact on other people.

2. Role confusion As for this problem, role expressers had suitable qualifications but the society did not clearly determine roles. There was conflict between roles. Or the society did not determine roles for people. These made people unable to decide that when they should express roles.

3. Role violation and other role As for this problems, people did not follow their roles but they expressed other roles which did not involve their roles.

2.1.5 Role measurement

Role measurement could be done by studying behaviour or action of those people. Somjit Suphanthas (1991:136) said that there were 2 methods of studying behaviour as follows;

2.1.5.1 Directly studying behaviour by

1. Direct observation was a method which could prepare cooperation with the observed people at all times. This method could save the study time. But disadvantage of this method was that the observed people might not express their real behaviour.

Naturalistic observation. As for this method behaviour observers did not disturb behaviour of the observed people. The observers people did not know that their behaviours were observers. This method informed real behaviour. The results of this method could be used to explain similar behaviours. But, this method had to use a lot of time and had to consecutively be done several times.

2.1.5.2 There were 4 methods of indirectly studying behaviour as follows;

1. Interviewing was a method which a person wanted to ask information from a person or a group of people by himself or asking other person to interview such people. This method gave in-depth information but used a lot of time for the interview.

2. Using questionnaires This method was suitable for studying behaviours of a lot of people who diffusely stayed. This method was suitable for studying the past behaviours. Such method could be used by the researcher who wanted to know tendency of behaviour which would occur in the future. The advantages of this method were that the studied people could give information on the hidden behaviour or various behaviours which were not expressed. The studied people could answer questionnaires at any time and had to be literate.

3. Experiment As for this method, the studied people would be under control of the researcher. This method could be done in the laboratory. But the study of behaviours of people in the community by controlling various variables had little probability.

4. Recording As for this method, each person had to record his behaviors.

As for research, the researcher used the structural interview as the tool for the study of roles in community environmental management of community housing officers in Bangkok due to several suitability as mentioned above.

2.2 Concepts on dissemination of knowledge, coordination, and leadership

2.2.1 Concepts on dissemination of knowledge

Dissemination of information and knowledge was dissemination of thought, information, and feeling from the information senders to the information receivers. And, it was mutual exchange of experiences and understanding in order to change behaviours of a person or a group of people.

Dissemination of knowledge and information was a model of communication which was important to human behaviours on living together. Humans used various methods to diffuse information, feeling, opinion and exchange experiences. Williams (1966:17) said that "communication was dissemination of thought, information, and attitudes from a person to a person or from a place to another place."

Rogers (1973:43-45) said that communication was a process of sending the information or thought to the information receivers in order to change some behaviours of the information receivers. As for the process of communication, the information senders would change knowledge, information, opinion, attitudes, emotion, or any feeling to be in the characteristics which could be disseminated to other people such as speech, letters, or pictures. The information receivers' understanding on the information depended on ability and experience of the information receivers.

However, the main goal of disseminating knowledge and information was that the information senders wanted to change some behaviours of the information receivers in order to make the information receivers accept or follow according to the goals or objectives determined by the information senders. Bunlert Supdilok (1980:33-35) determined 4 communication objectives as follows;

1. Objective on information. As for this objective, the information senders reported the event to other people according to the fact. Communication would be efficient if the information attracted interest and was accepted by the information receivers.

2. Objective on opinion or inducement focused on explaining or presenting opinions on events or facts which occurred in order to make the information receivers change belief, attitude, behaviour. The information senders initially explained facts in order to make the initially explained facts in order to make the information receivers know the changing events and environment. After that the information receivers would consider the consistency of their needs, belief, and attitudes.

3. Objective on knowledge or education presented facts or stories which were useful to the information receivers for decision in daily life. This created atmosphere or activities of learning to the information receivers. As for the process of presenting the information, the information had to be interesting and acceptable to the information receivers. Sometimes, the inducement method had to be used for stimulating the information receivers.

4. Objective on entertainment stimulated feeling and emotion of the information receivers rather than thought and behaviour the results which occurred with the information receivers were a short period results.

Seven & Tankard (1979:129-140) said that information disseminators had to have the following qualifications;

1. They had to have communication skills. They correctly used language and had good speaking methods.

2. They had to have reliable personality. They liked to help other people and had good human relationship. Such qualification made the information receivers satisfied to receive the information. And such qualification always increased reliability of the disseminated information.

3. They had to have good attitude and satisfaction with their work. Such qualification made their work have quality and achieve the goal.

4. They had to have good attitude toward the information senders and receivers. Such qualification would lead to good relation and caused satisfaction with mutual communication.

5. They liked to disseminate the information or explain in order to bring about understanding. In case of having the communication problems, if the information disseminators did not like to clearly explain something, the sent information could be easily distorted from facts.

6. They liked to seek more knowledge. This qualification made the information disseminators have high ability on dissemination and have enough knowledge to explain or give examples in order to create understanding to the information receivers. But, it did not mean that information disseminators having a lot of knowledge could considerably distort the information. The information disseminators had to have moral, be sincere, and honest.

7. They had to have ability to evaluate the information dissemination. And they had to always improve the dissemination method in order to better the efficiency of sending and receiving the information.

As for dissemination of knowledge and information on community environmental management, the community housing officers had to have knowledge and pay attention to a lot of problems. As the officers had to work with a lot of people, it was difficult for them to make everybody correctly know the information, concept, and practical methods on conservation of environments in the community. So, the community housing officers had to realize importance of dissemination of knowledge and information to people in the community in order to make the community have suitability for living, cleanliness, order, and good quality of life.

2.2.2 Concepts on coordination

Coordination was a technique of the administration process and was very important in the past, present, and future. It was both science and art, which every executive or staff had to understand and correctly apply in order to bring about working benefits. If people jointly did an activity, they had to mutually understood and fully coordinated then, that activity would efficiently achieve the specified

objectives. Good coordination helped reduce conflicts in the organization and saved time and resources (Jumphon Nimphanich 1991: 286).

Lui Jampathed (1983:82) said that coordination was executives' important tool which enabled people to jointly work according the objectives. Coordination and interpretation had mutual relation. In the small agency or organization, executives were both coordinators and interpreters. Coordination was like a drawing. Interpretation was like details of that drawing.

Somphong Kasemsin (1983:155-157) mentioned principles of coordination as follows;

1. Coordination was an important tool which caused unity of administration according to goals and principles of administering the organization. As work division and system arrangement had to be carried out according to goals, objectives. Policy, and plan, therefore, coordination was to coordinate working and policy or objectives.

2. Coordination involved human, work, and mind because coordination was to induce staff to jointly work in groups. The important thing of coordination was cooperation in working.

3. Coordination closely involved time because time was the heart of coordination. Determination of work plan and prediction in the suitable time was important to coordination. Suitable time determination caused consistent coordination.

4. Coordination involved administration techniques which were input and output. Input was administrative resources such as human, money, things, and administration. Moreover, administrative resources should include authority, time, will, and facilities in order to bring about good results. So, good coordination had to use various administrative techniques such as providing good planning, organization chart, duty chart, work distribution chart, process or work flow chart, and place and physical layout. Such things caused implementation to be consistent with plans and work characteristics. Then, the conflict would decrease. And coordination was better.

5. Coordination involved communication. Good Communication caused good understanding, cooperation, and coordination. Bad communication might cause wrong understanding. Then, coordination within the agency or between agencies did not cause good results.

6. Coordination was coordination of thought and opinions of the group members or colleagues to have consistency. So, executives had to use leadership to coordinate opinions of the group and had to cause satisfaction with that situation. Then, coordination would be efficient.

7. There was formal and informal coordination in every level of supervision. There should be coordination in every level. Coordination was more important to the big organization. Lack of coordination in any level could impact on the group.

8. Coordination and environment Good executives should perceive problems and condition which might always change. They had to implement coordination to be consistent with the changing condition. This change should be reasonable done in the suitable time. And executives had to suitably control such change.

As for the study of coordination, the community housing officers should coordinate in order to make community residents jointly look after their community housing. Such officers might coordinate with the community residents, community committee, district office, or other related agencies so that community residents could receive quick services and had better quality of life and living.

2.2.3 Concepts on leadership

Bass (1981:7-14) defined that leader meant the center of the group process. Leaders had to have suitable methods which made other people follow their command by inducing rather than compelling. Leaders had to use the existing authority to determine members' behaviours in order to achieve the goals.

Somphong Kasemsin (1983:286) said that leadership meant use of influence or authority by leaders to subordinates in various situations for operation by using the mutual contact process in order to achieve the specified goals.

Sunthorn Wongwaisayawan (1992:226-229) said that leadership was an important factor of the government organization or private organization. The organization would be progressive if executives in that organization had enough leadership to induce staff to work according to the specified goals. Moreover, leaders were important to the agency as follows;

1. Leadership would take out executives' knowledge and ability to make benefits for the organization.
2. Leadership helped make members of the agency have unity.
3. Executives' leadership made subordinates accept and have confidence in executives. If executives had more leadership, they would increasingly take out subordinates' for that agency. This not only made the organization survive, but also caused progress pride, honour, fame, and success to the organization.

Thongchai Santiwong (2000:410) mentioned leadership skills as follows; Executives who were leaders had to create good cooperation among members of the organization. Executives had to perceive leadership roles. Executives had to use leadership to efficiently use staff and make staff jointly work according to the organization objectives.

Nopphadol Vechauwas (1989:23) said that leaders should have the following qualifications;

1. Knowledge and ability
2. Self confidence
3. Ability to induce other people's mind
4. Ability to efficiently interpret
5. Ability to adapt to other people
6. Being brave to express opinion

Thongchai Santiwong (2000:76) said that leaders had to have good human relation. They had to coordinate with other sections (Liaison). They had to coordinate with people outside the organization, especially people in the same level such as various organizations or association. They had to build relation with people outside the organization. And they had to contact colleagues in other sections in order to bring about good relation and mutual help.

Robert L. Katz (1972) who was a famous businessman and academician said that executives had to have 3 working skills as follows;

1. Technical skill meant knowledge on use of tools. For example, mechanics had to know about almost every kind of tools.
2. Human skill meant ability to work with other people. Executives had to have human relation, understand, and know how to induce colleagues to cooperate.
3. Conceptual skill meant knowledge on theories and principles. Executives had to understand team working condition. They had to understand involvement of activities or duties of various works. And they had to understand relation and coordination of each duty in the organization and social, political, economic environment, which would cause success to the organization.

In conclusion, leadership was a technique of inducing other people to have confidence in leaders. Intellectual and knowledge was a qualification which expressed leadership. Good leaders should also be good psychologists. They had to analyse or guess the information receiver's mind in order to make the information receivers accept and follow the concept. Leaders had to express their outstanding characteristics by creating cooperation of the organization members. Capable leaders helped the organization achieve success in every activity which was being implemented in a short period or long period. The community housing officers' leadership roles in community environmental management considerably helped stimulate community residents to have participation and correctly behave in order to make the community have order and cleanliness which made community residents have better quality of life.

2.3 Roles in community administration of the community housing officers

There were totally 19 community housing offices in Bangkok. Each community housing office was supervised by a chief. Saowakhon Sudsawas (Appendix page 83:1995) said that roles of the community housing officers involved administration, report, making and controlling the recruiting and purchasing budget under the specified regulations, compiling the information, and performing basic duties in the community housing by coordinating with related agencies such as Community Housing Division, state and private agencies, community committee, and

community residents. As for coordination, such officers were representatives of National Housing Authority which assigned the officers to control and protect various properties of National Housing Authority, control lessees, buyers, and other residents to comply with the conditions of hire purchase-lease contracts, prevent use of properties of National Housing Authority or public benefits jointly used in the community housing without permission, control social order in the community housing for preventing violation of right on living together, keep cleanliness in the community, solve problems in case of having complaints, give advice and control construction and addition of buildings. According to the permitted design, provide services on public utility such as tap water, electricity, initially maintain the building, composition of buildings and public utilities, collect rent, fee, insurance charge, service charge, and various benefits in the community housing, keep cash and deposit money in the bank, make financial accounts classified by income category, control and be responsible for use of receipts, follow, accelerate, ask for payment of debts, present methods of seeking more benefits from the existing properties, make, renew, and amend contracts, transfer and receive right, terminate contracts, receive and follow application for transfer of construction and land ownership, create unity and good understanding among community residents and between residents and National Housing Authority, encourage residents to have participation in administering the community housing and be responsible for administering the community housing in the future.

2.3.1 Guidelines on community housing management

Apart from administration policy of National Housing Authority according to the plan of developing residence in the community housing during National Society and economy development plan No.8 (1997-2001), National Housing Authority determined guidelines on community housing management in order to build the community housing as the community as follows;

2.3.1.1 Creating possessive feeling and relation among community members

As for possessive feeling and relation among members in the community or family and colleagues, community could occur as long as people in the community perceived feeling of unity and felt that they were in the same group.

Such feeling was possessive feeling of each person toward residence and residents. Each person felt that this place belonged to him. He was a part of this place. People living in this place were in his group.

Such feeling resulted from “relation” among residents or members in the community who had mutual tie, cooperation, and help which led to unity of the community, which enabled the community to exist.

In conclusion, creation of possessive feeling and relation among members in the community would affect development of community for good quality of life by depending on the integrated planning and management process such as physical planning, community order planning, and communication planning for creating community conscience. Good planning caused more success.

2.3.1.2 Social activity management of the community

Social activity management of the community which was useful for living together in the community caused movement and creative channels in the wide level among residents or members in the community. Social activities comprised

1. Activities on service and welfare, economic encouragement, keeping safety, and environmental development which made residents peacefully live.
2. Religious, traditional, and cultural activities which responded to mental satisfaction.

2.3.1.3 Social order arrangement of the community

Community could peacefully exist if there was arrangement of social order of the community. The community should not allow each person to do various things which disturbed and annoyed other people.

Order arrangement was determination of community order as the practical norms and rules which were useful for living together in groups and community. Moreover, order arrangement was a tool which advised practical guidelines for residents or members in the community.

2.3.1.4 Giving education, instilling habits, and socialization on order

It was a process of improving behaviors of residents or members in the community. It was a basic method which helped arrange social order of the community. Such process could be directly and indirectly made in order to help residents know and understand order and living in the community. And such process enabled new residents or new members to correctly adapt and sufficiently have participation with other people.

2.3.1.5 Order control

The objective of order control was to prevent violation of privileges and duties in order to bring about peace to people in the community.

The measures of controlling residents or members in the community to follow the specified regulation were as follow;

1. Advise and warn residents who did not know and understand regulations.
2. Warn and prohibit residents who forgot, neglected, or avoided.
3. Prohibit and punish residents who violated regulations after warning.
4. Compromise if there was mutual conflict and dispute.

2.3.1.6 Provision of the management and administration institute in the community

Provision of social activities and order arrangement in the community could be continuously changed if there was an institute to administer and manage various things for the benefit of living together in the community. The institute might be established by people in the community or people outside the community by depending on conditions in the community and social conditions.

2.3.2 Management methods

According to division of structures of various agencies of National Housing Authority, Over 40% of all staff of National Housing Authority were staff of Community Housing Section (Saowakhon Sudsawas;1995: 1) This showed that Community Housing Section had more work than other section. As community Housing Section was an agency which closely supervised the community housing

administration, this research emphasized the study of management of Community Housing Section for use in analyzing working and coordination of Community Housing Section, Community Housing Office, community committee, and other related agencies.

The researcher would like to conclude management methods of Community Housing Section as follows;

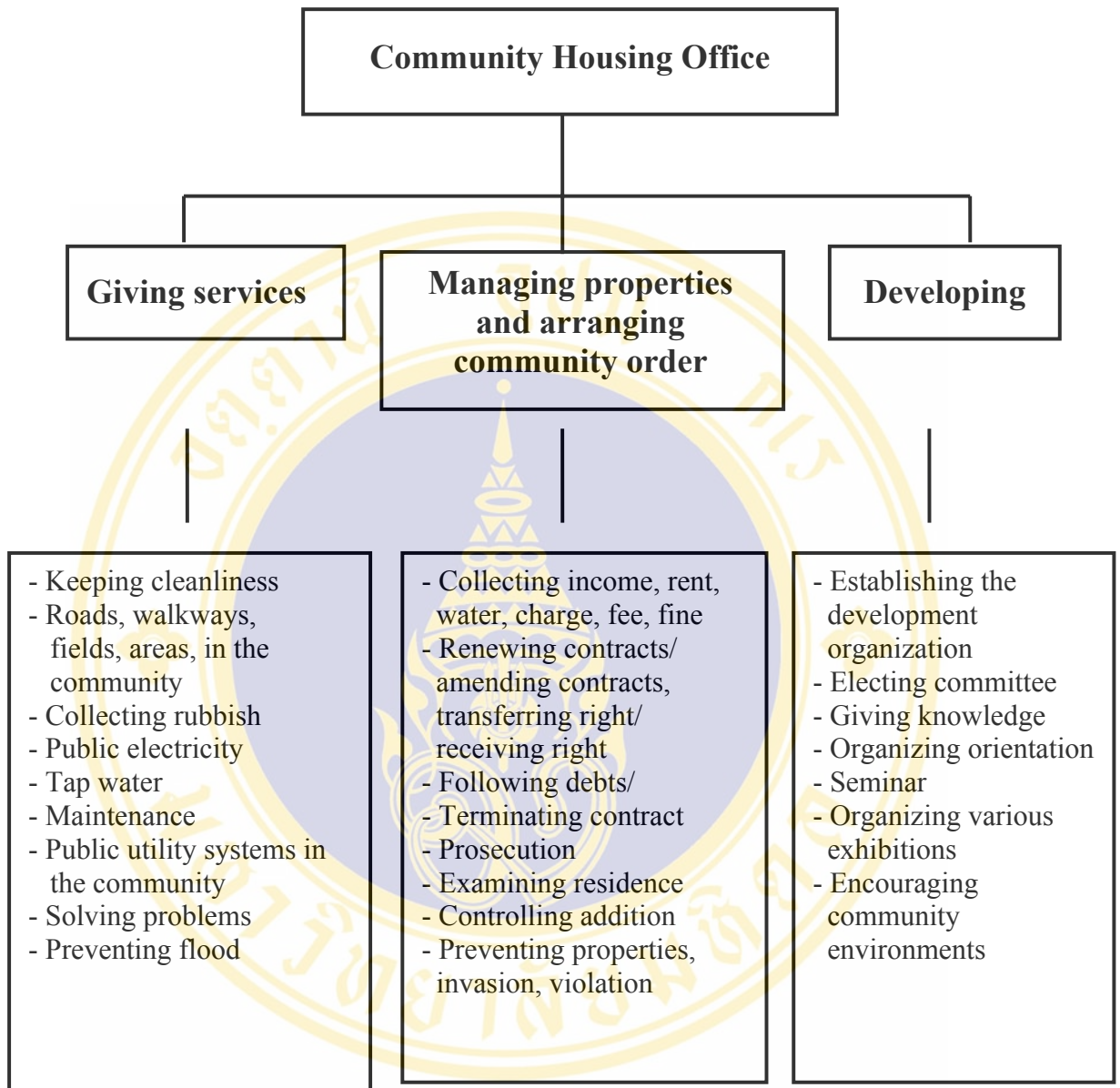
2.3.2.1 Community housing administration and policy determination

Saowakhon Sudsawas (1995:37-38) said that community housing administration and policy determination for the highest benefits was a framework which determined Community Housing Section to express business roles. As for community housing administration for the highest benefits, it was necessary to determine administration policy and have good management system and planning for efficiently supervising operation so that Community Housing Section could quickly give services to people and solve problems. Moreover, such section had to develop collection of income deriving from using properties to be consistent with the changing economic condition. Business roles were very important for survival and growth of National Housing Authority. At present, the private sector had readiness and ability to invest in the residence business, there was much competition in the market, And people had more opportunities and options. So, the work on after-sale service and property benefit management had to increasingly adjust strategies of administration and management in the model of business.

2.3.2.2 Community housing order arrangement and development

Community Housing Section had to be responsible for physical and social environment of the community housing in order to make residents in the community housing have conscience and able to gather to arrange order on living together and protect public properties by themselves.

Apart from implementing administration and management, Community Housing Section implemented service work such as improving and repairing the building, tools. Vehicles. Public utility system, looking after gardens, and making public relations sign-boards. Service work could be concluded according to the following chart 2 ;



Source : Saowakhon Sudsawas and team

Chart 2 Service giving scopes of Community Housing Office

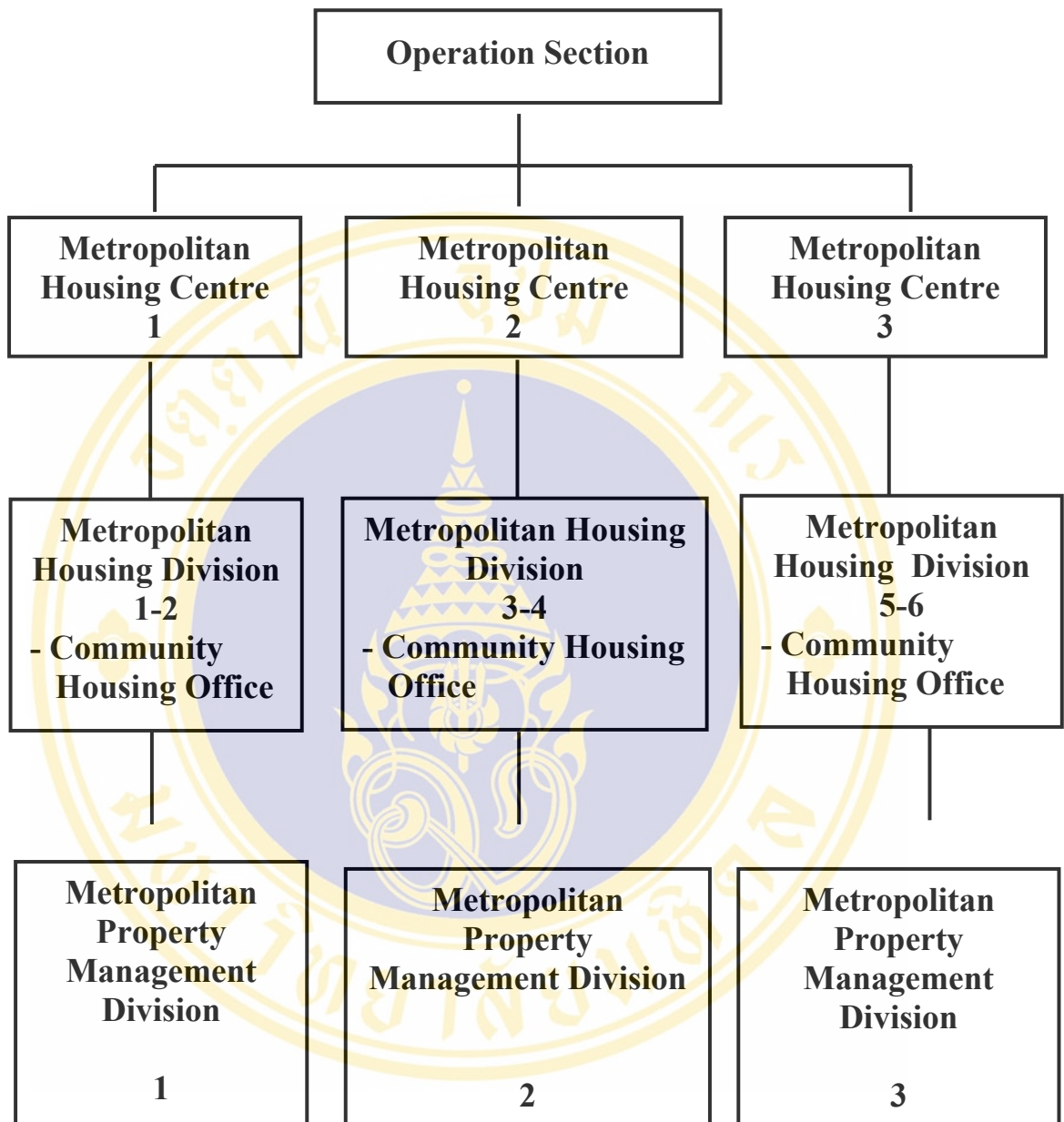
As implementation characteristics had diversity in almost every aspect, Community Housing Section had to be responsible for a lot of activities. After seeing such problem, National Housing Authority had policy to reduce responsibilities of the community housing by considering that if any community housing had readiness and ability to administer itself, National Housing Authority would allow residents in the community to administer in the form of community committee. And National Housing Authority tried to transfer public utility systems to local agencies and other related agencies. However, it was necessary to have Community Housing Office in each community housing in order to coordinate with community committee and related agencies although some responsibilities were transferred to such agency,

2.3.3 Community housing management structures

National Housing Authority regulations on division of state sections and determination of main duties of sections in National Housing Authority (1990) announced on December 28, 1992 had divided structures of National Housing Authority into 3 parts as follow;

1. Administration
2. Administration Assistance
3. Operation

As for structures of National Housing Authority, agencies which directly involved the research of the researcher were Metropolitan Housing Centres 1-3 which were agencies of Operation Section Community housing management structures could be concluded according to chart 3 as follows;



Source : Metropolitan Housing Centre , National Housing Authority in February, 2004

Chart 3 Structures of dividing agencies of Community Housing Section

2.3.4 Importance of community committee

As for the research on roles in community environmental management of community housing officers, the researcher also studied roles of community committee because, sometimes, community housing management was a duty of community committee. So, the researcher had to study National Housing Authority regulations on community committee (1987) and Bangkok regulations on community committee (No. 3) (1996). Both regulations had similar contents on roles of community housing committee, which could be concluded as follows;

Community committee were a group of people appointed by Community Housing Office or elected by people in the community to be the representatives of the community. They held the position for 2 years and should not be less than 20 years old. They had to be real members in that community housing. Their names had to be appeared in the copy of House Registration stating that they stayed in that community housing not less than 180 days.

There should be at least 7 elected community committee in each community. If there were over 140 families in any community, that community had to elect another committee member per every 20 families. Total committee should not exceed 25 people.

Roles of community committee

The researcher could conclude roles of community committee as follows;

1. Maintain the nation, religion, and king institutes
2. Coordinate and jointly implement with state agencies, organizations, and private agencies in order to bring about benefits to people in the community
3. Survey information of the community, problems, needs, and recommendations of residents in the community and consider for implementation according to steps.
4. Determine policy and plan implementation according to the community developing process and community suitability.
5. Develop the community on physical, economic, and social aspects by people's participation and worthily use resources in the community.
6. Create unity and discipline of residents in the community.

7. Encourage cultures, moral, and traditions.

8. Protect community properties which involved community development. If any community received money from Community Housing Development Fund, community committee had to use money according to conditions of National Housing Authority.

9. Disseminate performance, follow and report working of various organizations and agencies performing duties in the community to district directors.

10. Find methods of solving various problems of the community by democratic ways.

This research found that community committee were very important to the community housing. Some community housing did not set up community committee because National Housing Authority did not wholly transfer right in residence to the community. Therefore, management was still the duty of Community Housing Office.

2.4 Concepts and policy on community environmental management

2.4.1 Concepts on community environmental management

Concepts on community environmental management comprised diversified implementation guidelines. Therefore, the researcher would like to explain main concepts by explaining the meaning of each word of the term “Community Environmental Management” so that the meaning of each word could be a framework for explaining the conclusion of guidelines on community environmental management at the end of the research.

Stock Exchange of Thailand (1997:53) explained that management was a process of planning, determining policy and goals, arranging the organization, commanding, supervising, and evaluating operation results for improving implementation in order to

1. Make staff follow regulations and policies specified by the administration section.

2. Make staff who had knowledge and ability perform duties according to the work plan.

3. Make staff understand the organization objectives and sure that that they received enough training.

4. Make various measures specified in the regulations and policy be a part of the work system and daily working methods of each agency in that organization.

National Environment Quality Preservation and Encouragement Act for 1992 (Section 4) defined that environment meant various things which had biological and physical characteristics around humans, naturally occurred and were made by humans. According to this meaning, environment meant every kind of tangible thing around humans. This meant all environments which could be touched. Such definition was consistent with the definition of Sritthichai Tanthanasurit (1985:2) who divided environments into 2 main categories as follows;

1. Natural Environment which always occurred together with other environments could be divided into 2 kinds as follows;

1.1 Living things had specific qualifications and characteristics such as plant, animals, humans.

1.2 Non-living things naturally occurred. They might be seen or could not be seen such as soil, water, weather.

2. Man-made environments. Such environment was made by humans for meeting the need and being the living benefits of humans. Man-made environment was divided into 2 kinds as follow;

2.1 Physical environment was built for giving convenience for humans living such as buildings, house, roads, vehicles.

2.2 Environment or environmental abstract was built for making people happily live together such as law, religion, tradition.

Bangkok Metropolitan Regulations on Community Committee defined that community meant crowded community, suburb community, community housing, and urban community. Such regulations were determined by Bangkok Metropolitan and made as Bangkok Metropolitan Notification.

Community Development Department (No Printing year: 77) defined that community meant groups of people who stayed together as the small society, lived in

the same area, and had joint benefits. Similarly, Chirawat Nijate (1985:2) defined that community was a social unit which comprised a group of members living in the same area, having similar background and living condition, having joint benefits, and being able to meet basic needs of most members. And community meant a place where a lot of people having different ages, knowledge, skills, ability, sex, occupation, and benefits jointly stayed.

2.4.2 Policy on community environment

As for management guidelines, Environment Plan and Policy Office, Ministry of Sciences, Technology and Environment (1997: 77-84) determined important contents on National Environment Quality Preservation and Encouragement Plan and Policy for 1997-2016 by having important contents of the policy on community environment as follows;

Goal

Every level of community had to manage community environment and green areas in order to create quality of life of people, which was suitable and consistent with potential of natural ecosystem economy, society, cultural heritage, and technology.

Policy

Policy on community environment comprised 9 policies as follows;

1. Policy of determining direction and organizing the growth of every level of community by thinking of potential of nature, culture, society, economy, population, ability of basic service structures, population, ability of basic service structures, public service in order to make the community continuously participate in development of the society and environment.
2. Policy of encouraging the improvement of areas in every level of community for developing and controlling use of land to be systematic and efficient.
3. Policy of encouraging development of community both original community and new community in the form of perfect urban community.

4. Policy of conserving natural resources and reserving land as green areas which created freshness and sufficiently encouraging environmental quality for the community and people in the future.

5. Policy of making the locality accelerate and create good image of the community environment in every level of community.

6. Policy of encouraging development of rural community to be perfect community and development of occupation, work source, marketing, social service, and environment.

7. Policy of efficiently combining basic service structure plans which were necessary for every level of community.

8. Policy of upgrading the residence standard by encouraging occupation, marketing, social service, and environment for building the community environment to have suitable standard.

9. Policy of encouraging and supporting people to know the information and have authority to solve the problem on community environment.

Moreover, Bangkok Metropolitan Development Plan (2002-2006) No.6 (2002:125-126) determined guidelines on community development as follows;

1. Develop the community organization and community groups to be leaders for jointly developing the community with the state agencies and private agencies.

2. Develop quality of life of community residents to have better way of life on economy, society, sanitation, and mind.

3. Create security in residence for people having little income to have hygienical residence.

4. Develop economy in order to make community residents happily live in the society.

5. Develop administration organization and community development system of Bangkok Metropolitan to be able to efficiently manage community development.

As for concepts and meaning of community environmental management and community environment policy of Environment Plan and Policy Office, the researcher

could conclude guidelines on community environmental management in the future as follows; Community Environment Policy focused on systematically planning and determining growth direction of the community by closely supervision in order to work consistently with the social condition, economy, culture, politics, and potential of nature. Moreover, there should be development, encouragement and improvement of green areas, physical environment, and biology of the community in order to better quality of life of community residents.

2.5 Guidelines on community environmental management in Bangkok

2.5.1 Community rubbish management

There were several methods which could efficiently manage rubbish such as management rubbish at source (reducing rubbish discarding quantity or using decomposed materials), collecting, transporting, transforming rubbish, reusing, and disposing rubbish which could not be reused by hygienically burying due to easy control and cheap implementation expenses. Moreover, there were other disposal methods such as making fertilizer and burning by using high-heated burning stoves.

As for the community housing important issues which considerably affected rubbish management in the community of National Housing authority were as follows; People did not give cooperation in paying fees. They lacked realization and conscience of community rubbish management. So, they did not give cooperation in keeping cleanliness of the community.

Efficient rubbish management criteria were as follows; Rubbish in the community had to be quickly collected from the community by using the economical and suitable methods which caused least pollution to the environment. Moreover, there should be consideration of necessary elements as follows;

Rubbish types, quantity, and characteristics which could be used as the information for use in selecting the suitable rubbish management methods.

Expenses were expenses for investment, implementation, repair, and maintenance.

Environmental problems which caused pollution to the ground, water source, and air.

Recycling some resources of rubbish.

Related Law, regulations, and agencies.

2.5.1.1 Rubbish quantity

Kriengsak Udomsinroj (1994:184-185) said that little or much rubbish quantity of buildings depended on the following factors,

- Old and new condition of buildings
- Use of buildings
- Economic condition of the building users
- Density of building users
- Rubbish management of buildings
- Dissemination of knowledge on recycling
- Building users habit
- Environment in the buildings
- Season

2.5.1.2 Concepts on rubbish reduction

Each household had to collect rubbish for cleanliness of his residence. The concept on rubbish reduction should be used for bringing about efficient rubbish disposal. Thares Srisathit (1995:Copy) mentioned rubbish reduction methods as follows;

1. Avoid or stop using and consuming things which were dangerous for consumers, other people, and environment such as un reusable products and every toxic substance.

2. Reduce rubbish quantity. This method was very necessary for the community in the present time. Community residents had to jointly implement such method. And they had to campaign for rubbish reduction which could be made by several methods such as reducing use of various packages of products.

3. Utilize old things such as using products which could be reused several times.

4. Changing old materials as new materials which could be reused.
5. Respond to the campaign

Moreover there was 5 step management process for rubbish reduction as follows; (Phairoj and Prasoot / 1996:2-5)

- | | |
|--------|--|
| Step 1 | Reduce rubbish or reduce at source. |
| Step 2 | Reuse products |
| Step 3 | Recycle |
| Step 4 | Recovery was to utilize rubbish energy as the fuel for producing electricity from the rubbish burning stove or utilizing gas which stemmed from accumulation of rubbish in the hole such as methane. |
| Step 5 | Rubbish disposal |

2.5.2 Wastewater-sewage water management

2.5.2.1 Meaning of wastewater-sewage water

As for wastewater-sewage water management, Kriengsak Udomsinroj (1994:121-122) explained that sewage water meant water released from the building to the public drain system or wastewater system of the build before flowing to the public drain system. Sewage water was not clean. As there were diseases in some category of sewage water, it was necessary to have the suitable draining system for hygienically compiling all sewage water from the building. There should not be a smell and blockage in the draining system. Sewage water had to be quickly and efficiently drained.

As for wastewater, Benja Phuangsuwan (1982:57) explained that wastewater was the water which was different from natural water or had deteriorating qualification which caused bad results after utilizing that water source such as causing to health after consumption, making aquatic animals die or unable to live in the water source. Wastewater was black, turbid, dirty, and smelly.

In conclusion, sewage water-wastewater meant water which was consumed and released to the drain. There were a lot of diseases in the sewage water. If that sewage water was not treated or drained in the suitable time, that sewage water would become wastewater which was dangerous for everybody.

2.5.2.2 Community wastewater problem and characteristics

Chatchai Rattanachai (1996: 195-204) mentioned community wastewater problems and characteristics follows; Community wastewater comprised waste matter of human body (excrement and urine) and sewage water from doing other activities in the house such as sewage water from bathroom and kitchens. Initially wastewater was grey and turbid. It was full of suspended substances and solvents. It was slightly smelly and poisonous because it comprised several types of microbes. Due to high temperature in Thailand wastewater quickly reacted with Oxygen. This made wastewater smelly.

Wastewater from the community had clear source. As the community wastewater drain system in Thailand was not efficient, it was difficult to supervise. Actually, most household wastewater which was full of toxic substances was initially treated by “Septic Tank” and released to the public wastewater draining system. Therefore, pollution problems which stemmed from community wastewater were generally seen in the city, especially Bangkok.

In conclusion, the community wastewater problems were as follows;

- Septic Tank used for treating waste matter was quickly full. So, the pipe was directly joined from the toilet or Septic Tank to the public sewage water drain.
- Other wastewater in the community such as wastewater from bathing, washing or wastewater from kitchens which was not drained to any wastewater treatment system was mostly drained to the public drain.
- Most public drains would drain wastewater to the public water source. Initially, the objective of building the drain was to drain rainwater.
- Household sewage water which was not treated might cause contamination in the surface water source.
- Directly discarding rubbish in the water source would block flowing of the waterway and deteriorate quality of water.
- Wastewater from the rubbish might flow into the river, canal, or underground water source.
- Wastewater in various river basins was a mosquito-breeding place and carried various diseases into bodies of various living things.

2.5.2.3 Guidelines on wastewater problem solving

According to the training document on community wastewater management (Copy: 1999), everybody, especially community leaders should have roles and participate in solving the wastewater problem in the community by cooperating with the state agency, private agency, and community residents. Community leaders could reduce and solve the wastewater problem by

- Following the information of various state agencies in order to receive knowledge and advice on the problem-solving methods.
- Not doing an illegal act which caused the wastewater problem to be more severe such as draining waste matter, discarding rubbish and leftovers into the water source and the public drain.
- Informing community residents about the information in order to make the community residents jointly solve the wastewater problem in the community.
- Establishing villager groups and various occupational groups, temple, school, and private development organizations in order to jointly oversee smuggling on draining wastewater from various sources in the community and oversee wastewater source which impacted on the community and environments in the community.
- Efficiently maintaining the wastewater treatment system in their houses.
- Duty performance for preventing wastewater in the their houses and giving knowledge and advice on the wastewater preventing methods to neighbours and general people.
- Participating in the activities of developing environment in the community such as dredging the drain, collecting rubbish in the water source.

2.5.3 Green area management

2.5.3.1 Meaning

According to the report on management of community environment and green area in the main city : Chonburi Province of the Faculty of Environment and Resources, Mahidol University, green area meant open space which might be

agricultural area, forest, relaxation place such as beach, park, sports field, playground, area of controlling development or preservation of natural condition, swamp, and vacant land.

The report on Making the Operation Plan on Management of Community Environment and Green Area in the Main City: Chiang Mai (1996-5-2) defined that “Green Area ” meant open space around the city or in the suburban and urban area where there was slight use of land. Moreover, it mentioned the meaning of Green Area in the characteristic of relaxation place or park as follows; It was use of land which was very important to urban lifestyle. Apart from responding to relaxation need, it was a part of open space and conservation of beautiful landscape of the city by utilizing natural resources to develop beautiful environment in the city. Moreover, it mentioned Green Area for recreation in the city by having the characteristic as open space around or between various categories of public building groups such as school, university religious place, building for living train track, roadside, walkway, riverside, natural swamp, and other open space which could be developed as the places where people could exercise or relax like park, playground, sports field and zoo.

Bangkok City Plan Making Report on Park Development (1998 : 111-112) explained that “Light Green Area ” was open space for recreation and preservation of environmental quality. There was utilization of such land in several characteristics. Such area was utilized as the following places;

1. Park was green open space provided and developed by the state agencies or private agencies for people to relax free of charge.
2. Zoo
3. Sport field
4. Boyscout camp of Bangkok Metropolitan
5. Race course was the relaxation place for the horse-race sport and other sports such as golf swimming, tennis.
6. Golf field
7. Bangkhunthien seaside area was the area where there was the problem on erosion of coastal land due to lack of preservation of the mangrove forest. Therefore, there was a plan to improve such area as the area of conserving the natural condition and relaxation place.

2.5.3.2 Guidelines on development of green area in Bangkok

Bangkok City Plan Making Report on Development of Park (1988: 67-69) recommended systematic development and improvement of the parks and created new perspective of environmental development as follows;

1. Increase ratio of the park into 2 square metres: 1 person within 2005
2. Determine construction of the park in every plan unit.
3. Build the park linking system for supporting the flood prevention project.
4. Give rewards for development for building open space.
5. Encourage the city green such as determining enough criteria for encouraging growth of trees at the roadside for improving air quality, protecting rivers and canals, growing community forests.

National Society and Economy Development Plan No.8 (1997-2001) clearly determined policy and made guidelines for preserving natural environment green area open space, and parks in the city to be proportional to number of people and growth of the community, creating landscape, and campaigning dissemination of knowledge for creating conscience of people and community organization in order to make people and community organization realize impacts from deterioration of natural resources and environment give cooperation in preventing following, and solving the problem on natural resources and environment for developing quality of life.

Bangkok Metropolitan Development Plan No.6 (2002-2006) determined policy of supporting development of parks and green areas as follows;

1. Encourage and develop Pocket Park in the community.
2. Encourage and develop parks and flood retaining ponds.
3. Encourage and develop green area in the city (Growing 5000,000 trees in Bangkok)

2.6 Researches and variables which involved the research

2.6.1 Related researches

After studying related research literatures, the researcher did not find researches which directly involved the research of the researcher. Therefore, the

researcher studied researches which were similar to the research of the researcher. Such researches showed details on various problems in the community housing of National Housing Authority as follows;

Punnapha Kraisin (1992) did a research on community housing administration on community supervision of National Housing Authority for evaluating community supervision of residents in Muang Mai Bang Phlee Community Housing by studying resident's problem, opinion, and attitude on community supervision on physical elements and management elements. The study results found that residents were not satisfied with physical problems. For example, community environment was not good. Service and public utility system design was not suitable. Moreover, residents were not satisfied with management problems such as problems on keeping cleanliness and preserving places and facilities, problems on lack of cooperation in community development, problems on living together, problems on giving services. In conclusion, most problems occurred due to initial planning of the project. Problems occurred during management. Management problems influenced dissatisfaction rather than physical problems.

Saowakhon Sudsawas and team (1991) reported the research results on the study of impacts from solving the crowded community problems by providing new residence. She determined factors comprising 10 variables for use in analyzing physical potential of the community as follows;

1. Size of land plots for building houses.
2. House characteristics
3. House materials
4. House utilization
5. Community orderliness
6. Community public utility
7. Public works in the community
8. Access routes of the community
9. Area condition of the community location
10. Community location

The research results found that factors which most satisfied community residents by bettering the environment were atmosphere and environment, location,

community orderliness, house design, uncrowded house and community, suitability of land and house size, establishment of nursery. Factors which moderately satisfied the community residents were roads in the community, wastewater drainage, flood prevention, light in the community, receiving services on electricity, tap water, and rubbish disposal.

Sirichai Traisarnsri (1996) studies local leader's perception of community environment and natural resources management : Case study : Amphur Khon Chong Luang, Amphur Thanyaburi, Pathumthani Province. He found that

1. Local leaders in each organization considerably perceived roles in campaigning creation of conscience and realization of the problem on creating knowledge and understanding on making the work plan and projects on participation, support of participation development of participation system. Planning system development of the organization had similar characteristics.

2. Local leader's position term had no relation with the perception level of roles in making the work plan and projects.

3. Local leader's educational level had no relation with the perception level of roles in creation of knowledge and understanding.

4. Social positions of public health committee and Tambon Municipality council member had no relation with perception of roles in participation and support of participation.

5. Local leader's participation in benefits had no relation with the perception level of roles in campaigning creation of conscience and realization of problems.

6. Dissemination of knowledge by local leaders had relation with the perception level of roles in creation of knowledge and understanding.

2.6.2 Variables which involved the research

2.6.2.1 Age

Age determined people's difference. A person at different age had different knowledge, understanding, and heed in any issue. So, people having different age level had different knowledge, perception realization, and actual roles. Anuchit Issariyamate (1993:118) studied factors which affected Tambon council committee's realization of solving the problem on the rotten Chaophraya River: Case

study: Amphur Muang Pathumthani Province. He found that different age caused different realization of solving the problem on the rotten Chaophraya River at the significant level of 0.05. People over the age of 36 had less realization than people below the age of 36. Malkis & Crasmick (1977:25-27) said that older people had better understanding on environmental problems and realization of environment destruction results than younger people. This was because older people received more environmental information. Similarly, Songtham Kanjanaphiboon (1998:80) studied roles in environment encouragement of executives of educational institutes under the responsibility of Vocational Education Department. He found that executives of educational institutes over the age of 50 more considerably had actual roles in management of environment in the educational institutes on creating behaviour of staff in the educational institutes and public relations than executives below the age of 50 at the significant level of 0.05.

After reviewing literatures which involved age the researcher set the hypothesis for this research that the factor on age caused a change in the roles in community environmental management of the community housing officers.

2.6.2.2 Educational level

Educational level could initially inform people that people having high educational level had better knowledge and attitude than people having lower educational level. Setthaphong Pujchakarn (1998:96) studied knowledge, attitude, and participation in community rubbish management of the council member of Tambon Administrative Organization: Case Study: Amphur Ban Bung, Chonburi Province. He found that the council members of Tambon Administrative Organization having different educational level would have different attitudes toward rubbish management. Similarly, Suwimon Phakphiboon (1992:162) studied Factors which influenced behaviour on rubbish disposal of housewives in Bangkok. She found that housewives having educational level higher than bachelor degree. More correctly had actual behaviour on rubbish disposal than other groups. While housewives studying in the higher secondary level or vocational level had correct actual behaviour on rubbish disposal. After statistical testing, the researcher found that housewives having different

educational level had different actual behaviour on rubbish disposal at the significant level of 0.01.

After reviewing literatures which involved the educational level the researcher set the hypothesis for this research that the variable on the educational level caused a change in community environmental management of community housing officers.

2.6.2.3 Working duration

Boriphan Chaiwongkaew (1984:Abstract) studied behaviour on forest conservation of community development officers. He found that working duration for community development was a factor which had relation with developer's role behaviour at the significant level. Similarly, Aphinya Phetcharat (1986:Abstract) studied evaluation of ability of teachers who taught about Population Education. She found that teachers having different experiences would have different ability on each aspect.

Farung Meeudon (1996:95-100) studied local people's roles in community environment and natural resource management: Case Study: People in Villager Organization for Developing the North Eastern Region, Khon Kaen Province. She found that having working, experience on community environment and natural resource management would cause difference of roles at the significant level of 0.05.

After reviewing literatures which involved working duration, the researcher therefore, set the hypothesis for this research as follows; The variable on working duration caused a change in roles in community environment management of the community housing officers.

2.6.2.4 Size of community housing

According to standard of National Housing Authority (1995:1-1) there were 4 sizes of community as follows;

1. Village community comprised number of residence not over 500 units and number of population not over 2,500 people.
2. Tambon community comprised 4 villages, number of residences not over 2,000 units, and number of population not over 10,000 people.

3. Amphur community comprised 3 tambons number of residences not over 6,000 units, and number of population not over 30,000 people.

4. City community comprised 3 Amphers, number of residences-64,800 units, and number of population-90,000 people.

Most residences of National Housing Authority were tambon community upwards.

The community housing size was a factor which affected community environmental management of the community housing officers. Bigger size of the community housing caused more environmental problem. Somkhuan Kaweeya (1998:5) concluded that when more people lived in the community housing, the living condition changed. There was high density of number of population in the community housing of Huay Kwang, Din Dang, Bon Kai, Klong Tuey. So people's living behaviour was different. This caused deterioration of environment and dirtiness problems in the community.

As for this research, the researcher determined the community housing size according to number of flats of each community housing. After reviewing the literatures which involved the community housing size, the researcher, therefore set the hypothesis for this research as follows; The variable on the community housing size caused a change in roles in community environmental management of the community housing officers.

2.6.2.5 Receipt of information on community environmental management

Receipt of the information and communication was very necessary in the society for exchanging knowledge, opinion, experience, and understanding for use in decision when people felt uncertain about something. If people had more doubt, they wanted to receive more information in order to respond to 4 basic needs as follows; People wanted to know events. They wanted correct practical advice. They wanted to create their confidence. And they wanted to use the information to speak with other people (Suppharaphorn Thammachart, 1998: 62). This was consistent with the following researches; Plengphin Manyoo (1997: Abstract) studied knowledge and

performance of duty on environmental problems of executive committee of Tambon Administrative Organization, Phayao Province. She found that most executive committee of Tambon Administrative Organization well performed duties on environmental problems. And performance of duty on environmental problem of the executive committee of Tambon Administrative Organization depended on receipt of the information from the newspaper, magazine, journal, and the state officers at the significant level of 0.05.

Farung Meeudon (1996:95-100) studied local people's roles in community environment and natural resources management: Case Study: people in the villager organization for developing the north-eastern region, Khon Kaen Province. She found that receipt of environmental information caused different roles at the significant level of 0.001.

Uthai Hiranto (1980:15) said that the training experience was development of knowledge and ability of staff in the agency and was a factor which affected staff's perception and working. It taught people to learn and understand the suitable and modern methods and techniques which enabled staff to have more working efficiency.

After reviewing the literatures which involved receipt of information on community environmental management, the researcher therefore, set the hypothesis for this research as follows; The variable on receipt of the information on community environmental management caused a change in roles in community environmental management of the community housing officers.

CHAPTER 3

RESEARCH METHODOLOGY

This research is a survey research. The researcher focuses on studying the role in community environmental management by community housing authorities in Bangkok. Research tools for data collection for role in community environmental management are via questionnaire and in-depth interview. The objective is to study general problem situation in each community housing and to find out the guideline for problem solution. Research steps can be detailed as follows:

- 3.1 Population and random sampling
- 3.2 Research tool
- 3.3 Research tool creation
- 3.4 Data collection
- 3.5 Data analysis

3.1 Population and random sampling

Population: the population for the research are those community housing authorities from National Housing within Bangkok for a total of 19 communities from no. 1-6 as shown in table 4 with total population of 219.

Random sampling: the research will determine for random sampling via purposive sampling. The research will select to only those community housing authorities who have the role, power, duty which are directly related to the supervision and the management of community environment. They are those heads of department and their assistants at Community Housing Office for 2 from each community. Therefore, from the total of 19 communities, there are total of sample of 38 respondents.

Table 1 Community housing namelist , number of population and sample group

Community housing namelist	number of population *	sample group
Metropolitan Housing Center 1		
Metropolitan Housing Division_1		
1. Dindang 1	24	2
2. Dindang 2	25	2
3. Huay kwang	19	2
Metropolitan Housing Division 2		
4. Tung song hong	17	2
5. Ou Guen	7	2
Metropolitan Housing Center 2		
Metropolitan Housing Division 3		
6. Rom klauw	17	2
7. Fuen Nakorn Rom klauw	2	2
8. Suwintawong	8	2
9. Chalong Krung	3	2
Metropolitan Housing Division 4		
10. Klong Jan	17	2
11. Ramintra	9	2
12. Hua Mark	3	2
13. Bang Chan	6	2
14. Navamin	7	2
15. Ramkhamhang	10	2
Metropolitan Housing Center 3		
Metropolitan Housing Division 5		
16. Bon Kai	10	2
17. Klong Tuey	13	2
18. Thonburi	15	2
Metropolitan Housing Division 6		
19. Bangna	7	2
TOTAL	219	38

* Data population of Community housing at 12 February 2004

From : Metropolitan Housing Center , NHA.

3.2 Research tool

For data collection, research tools in used are:

3.2.1 Photographs to record the project environment: it will demonstrate the problem occurred from environmental management which is not appropriate and not clear. This also includes the elements related to general environment of each community for a total of 19 in Bangkok

3.2.2 Questionnaire: some part of questionnaire is created from the study of concepts, theories, and from asking the issue of role in community environmental management with community housing authorities in operation, as well as from the questionnaires conducted by other researchers. The researcher has adapted these knowledge and compose his own questionnaire in 5 sections. They are:

3.2.2.1 **Section 1:** personal data : this is the check list with open-ended question in order to gain general information for 9 variables. They are age, educational level, job service time, size of housing community, and frequency in information receipt on community environmental management

3.2.2.2 **Section 2:** data on knowledge dissemination as per one's present role in community environmental management. They are in rating scale with 4 choices from high, medium, low, and never for 20 question items

3.2.2.3 **Section 3:** Information on coordination as per one's present role in environmental management. They are in rating scales with 4 choices from high, medium, low, and never for 15 question items

3.2.2.4 **Section 4:** Information on community leadership as per one's role in environmental management. They are in rating scales with 4 choices from high, medium, low, and never for 20 question items

3.2.2.5 **Section 5:** Information on problems and obstacles occurred, opinions, and methods to deal with community problem, as well as general suggestions. They are structural interview with open-ended question in order to ask about problems and obstacles occurred, opinions, and methods to deal with community problem, as well as general suggestions

3.2.3 Criteria for scoring and leveling: the researcher has employed the criteria of scoring and leveling in frequency of information receipt, role in knowledge dissemination, coordination, and leadership for community environmental management, with the use of means and standard deviation in determining the level of score as follows:

3.2.3.1 Scoring and leveling for information receipt

Scoring	Score
Every day	4
Once a week	3
Once a month	2
Once a year	1
Never receive	0
<u>Level of information receipt</u>	
Low	0-12
Medium	13-24
High	24-36

3.2.3.2 Scoring and leveling for environmental management

Scoring	Positive Score	Negative
Score		
High	3	0
Medium	2	1
Low	1	2
Never	0	3
<u>Level of role in environmental management</u>		
Low	0-24	
Medium	25-42	
High	43-60	

3.3 Research tool creation

Composition of research tool: In order to gain validity and reliability, there has been a development prior to actual data collection as follows:

3.3.1 Study from books, documents, and related research papers as a guideline for questionnaire composition

3.3.2 Study from questionnaires conducted by other researchers, including asking the issue of problems of role in community environmental management with the authorities in operation line by adjusting for more appropriateness with the content of this research

3.3.3 Determine the content to compose the questionnaire as to cover the issue under study

3.3.4 Take the composed questionnaire to the attention of experts or advisors to check the correctness and for content validity in order to adjust the questionnaire to be more complete

3.3.5 Try out the questionnaire by interviewing heads of department and their assistants at Community Housing Office in other 4 areas. They are those in Prachaniwet, Rangsit, Nontaburi, and Samutprakarn for 8 respondents

3.3.6 Test the reliability value of the questionnaire with the use of Cronbach Alpha (referred in Puangrat Taweerat, 2540:125)

$$\alpha = \left[\frac{n}{n-1} \right] \left[1 - \frac{\sum s_i^2}{s_t^2} \right]$$

when α means coefficient of reliability

n means numbers of item

s_i^2 means score of variance in each item

s_t^2 means total score of variance

3.4 Data collection

3.4.1 Collect basic information from academic documents, books, and related research papers, in order to gain basic information as a guideline for further detailed data research

3.4.2 Survey actual situation of 19 communities by observing general physical environment with photographing within the community briefly.

3.4.3 Coordinate with heads of Community Housing Office in order to gain their cooperation in collecting field research data with advanced appointment-making for interview.

3.4.4 Collect data via questionnaire as well as in-depth interview in which the researcher will clarify the details of questionnaire with heads of department and their assistants at 19 communities prior to the interview.

3.5 Data analysis

After data collection process, there is a check on the correctness and the completion of the data, use SPSS/PC⁺ (Statistical Package For Social Sciences) for data analysis which is social science research tool in order to evaluate various statistics as follows:

3.5.1 For general information i.e. age, educational level, job service time, size of community housing, information receipt on community environmental management, the research will present them in percentage and means, as well as standard deviation

3.5.2 For information in section 2, 3, and 4, which are data on information dissemination, coordination, and leadership in the community as per one's role in community environmental management, the research will present them in frequency table and percentage, serving as data on role of community housing authorities in community environmental management

3.5.3 Analyse and compare the dissemination of knowledge, coordination, and leadership in the community with 5 independent variables i.e. age, educational level, job service time, size of community housing, and frequency in information receipt in terms of community environmental management with F-test statistics

3.5.4 For section 5 which is data on problem and obstacle occurred, opinions, and way to deal with community problem, as well as general suggestions, the researcher will use descriptive statistics to analyse as per fact in terms of rationale and to have the researcher's own feeling the least.



CHAPTER 4

RESEARCH RESULT

The study on role in community environmental management of authorities in community housing in Bangkok has employed the questionnaire for collecting data in role in community environmental management and the use of in-depth interview to study general problem situation occurred in each community and the guideline for problem solution. There is an interview with the samples who are heads of department and their assistants in Bangkok offices for 19 communities in a total of 38 respondents. The result has been systematically analysed which can be divided into 2 steps:

Step 1: General information of the samples: age, educational level, job service time, size of community housing, and information receipt on community environmental management with the presentation of data analysis in percentage and means (\bar{X})

Step 2: Information on knowledge dissemination, coordination, and leadership in community environmental management with the presentation in percentage, arithmetic means, and mode. Then, there is a comparison with 5 variables in section 1 which are in 2 groups with F-test statistics and for those variables over 2 groups, there is an employment of Oneway Analysis of Variance (ANOVA)

The researcher has presented data analysis statistically in following categories:

- 4.1 General features of samples.
- 4.2 Level of role in community environmental management .
- 4.3 Analysis of comparison the differences between variables and role in community environmental management.

4.4 Information on problems and obstacles occurred, opinions, and way to deal with problems, as well as general suggestions

4.1 General features of samples

General features of samples are age, educational level, job service time, size of community, and information receipt on community environmental management can be presented in following table:

Table 2 Numbers and percentage of samples as per age

Age	Numbers	Percentage
30-35 years old	9	23.7
36-40 years old	5	13.2
41-45 years old	5	13.2
46-50 years old	10	26.3
51-55 years old	6	15.8
56-60 years old	3	7.9
Total	38	100.0

From table 2, it has been found out that samples mostly are in the age of 46-50 years old for 26.3%, followed with those in 30-35 years old for 23.7%, age 51-55 years old for 15.8%, age 36-40 years old and 41-45 years old for 13.2% and age 56-60 years old for 7.9% respectively.

Table 3 Numbers and percentage of samples as per educational level

Position	Numbers	Percentage
Secondary school/ PorWorChor	5	13.2
PorWorSor	3	7.9
Bachelor's degree	29	76.3
Master's degree/ Ph.D.	1	2.6
Total	38	100.0

From table 3, it has been found out that most of the samples have their bachelor's degree for 76.3%, followed with Secondary school/ PorWorChor for 13.2%, PorWorSor for 7.9%, and Master's degree for 2.6% respectively.

Table 4 Numbers and percentage of samples as per job service time

Job Service Time	Numbers	Percentage
1 – 5 years	3	7.9
6 – 10 years	6	15.8
11 – 15 years	12	31.6
16 – 20 years	3	7.9
21 years up	14	36.8
Total	38	100.0

From table 4, it has been found out that most of the samples have over 21 years of job service time for 36.8%, followed with 11-15 years for 31.6%, 6-10 years for 15.8%, and 1-5 years as well as 16-20 years job service time for 7.9% respectively.

Table 5 Numbers and percentage of samples as per size of community

Size of community	Numbers	Percentage
1 – 10 buildings	8	21.1
11 – 25 buildings	4	10.5
26 buildings and more	9	23.7
Total	21	100.0

From table 5, it has found out that size of community mostly are in 26 buildings up for 23.7%, followed with size 1-10 buildings for 21.1%, and size 11-25 buildings for 10.5% respectively.

Table 6 Numbers and percentage of frequency in information receipt of sample as per source of information

Source of information	Frequency of information receipt				Never receive
	every day	once a week	once a month	once a year	
Radio program	8(21.1)	14(36.8)	4(10.5)	3(7.9)	9(23.7)
Television program	7(18.4)	14(36.8)	9(23.7)	6(15.8)	2(5.3)
Newspaper	10(26.3)	7(18.4)	8(21.1)	8(21.1)	5(13.2)
Journal/ magazine	-	8(21.1)	13(34.2)	5(13.2)	12(31.6)
Internet	3(7.9)	4(10.5)	3(7.9)	1(2.6)	27(71.1)
NHA.	4(10.5)	18(47.4)	14(36.8)	1(2.6)	1(2.6)
Government unit	2(5.3)	14(36.8)	11(28.9)	8(21.1)	3(7.9)
Private sector	2(5.3)	5(13.2)	15(39.5)	7(18.4)	9(23.7)
Training/seminar	-	7(18.4)	10(26.3)	17(44.7)	4(10.5)

From table 6, the study on source of information and frequency of information receipt, the result has shown that for radio program, most of the samples have been acknowledged the information for 36.8%, followed with never receive for 23.7%, everyday for 21.1%, once a month for 10.5%, and once a year for 7.9% respectively.

For television program, most of the sample has been acknowledge the information once a week for 36.8%, followed with once a month for 23.7%, everyday for 18.4%, once a year for 15.8%, and never receive for 5.3% respectively.

For newspaper, most of the sample receive the information everyday for 26.3%, followed with once a month and once a year for 21.1%, once a week for 18.4% and never receive for 13.2% respectively.

For journal/ magazine, most of the sample receive the information for once a month for 34.2%, followed with never receive for 31.6%, once a week for 21.1%, and once a year for 13.2% respectively.

For internet, most of the sample never receive the information for 71.1%, followed with once a week for 10.5%, everyday and once a month for 7.9 equally, and once a year for 2.6% respectively.

For NHA., most of the sample receive the information once a week for 47.4%, followed with once a month for 36.8%, everyday for 10.5%, once a year and never receive for 2.6% equally respectively.

For government unit, most of the sample receive the information once a week for 36.8%, followed with once a month for 28.9%, once a year for 21.1%, never receive for 7.9% and everyday for 5.3% respectively.

For private sector, most of the sample receive the information once a month for 39.5%, followed with never receive for 23.7%, once a year for 18.4%, once a week for 13.2%, and everyday for 5.3% respectively.

For training/ seminar, most of the sample receive the information once a year for 44.7%, followed with once a month for 26.3%, once a week for 18.4%, and never receive for 10.5% respectively.

Table 7 Numbers and percentage of level information receipt

Level of information receipt	Numbers	Percentage
Low level (0 – 12 scores)	19	50.0
Medium level (13 – 24 scores)	9	23.7
High level (25 – 36 scores)	10	26.3
Total	38	100.0

From table 7, the result has shown that most of the sample have level of information receipt on low level for 50.0%, followed with high level for 26.3%, and medium level for 23.7% respectively.

4.2 Level of role in community environmental management

From this research, the researcher has determined the role in community environmental management in 3 groups: they are knowledge dissemination, coordination, and leadership in the community as per following research result:

Table 8 Numbers and percentage in knowledge dissemination in community environmental management as per each item

Knowledge dissemination	Level of Knowledge			Never
	High	Medium	Low	
1. Acknowledge the residents on rubbish management	12 (31.6)	20 (52.6)	6 (15.8)	-
2. Acknowledge the residents on waste water management	6 (15.8)	22 (57.9)	10 (26.3)	-
3. Acknowledge the residents in green area management	8 (21.1)	18 (47.4)	9 (23.7)	3 (7.9)
4. Training/ seminar on the community committee for environmental management	6 (15.8)	8 (21.1)	20 (42.6)	4 (10.5)
5. Campaign on cleanliness supervision in the community	21 (55.3)	14 (36.8)	1 (2.6)	2 (5.3)
6. Campaign on the segregation of rubbish prior to throwing away	11 (28.9)	16 (42.1)	9 (23.7)	2 (5.3)
7. Campaign for the residents to take care of cleanliness in one's own room and in front thereof	9 (23.7)	14 (36.8)	6 (15.8)	9 (23.7)
8. Campaign for the residents not to throw away left-over food and rubbish in sewage and toilet	10 (26.3)	12 (31.6)	12 (31.6)	4 (10.5)

Table 8 Numbers and percentage on knowledge dissemination in community environmental management as per each item (continued)

Knowledge dissemination	Level of Knowledge			Never
	High	Medium	Low	
9. Campaign for shops not to throw away rubbish on ground or sewage	8 (21.1)	14 (36.8)	11 (28.9)	5 (13.2)
10. Campaign for shops to arrange for environment of beauty, cleanliness, and tidiness	8 (21.1)	15 (39.5)	12 (31.6)	3 (7.9)
11. Campaign for tree planning and development of park	8 (21.1)	19 (50.0)	8 (21.1)	3 (7.9)
12. Campaign for the residents for the benefit of exercise field available	12 (31.6)	18 (47.4)	5 (13.2)	3 (7.9)
13. Your SorChor has publicized for knowledge or has arranged for activities in environment on a continuing basis	5 (13.2)	17 (44.7)	13 (34.2)	3 (7.9)
14. Your SorChor has always arranged for activities for new knowledge dissemination in a new form	4 (10.5)	15 (39.5)	15 (39.5)	4 (10.5)
15. When SorChor has been trained or gone through seminar, they will transfer their knowledge to their colleagues	12 (31.6)	14 (36.8)	9 (23.7)	3 (7.9)
16. SorChor officers used to be bored with knowledge dissemination in environment which needs to be redundantly said	6 (15.8)	9 (23.7)	15 (39.5)	8 (21.1)
17. SorChor officers need to disseminate knowledge in environment via the board in front of the office	2 (5.3)	15 (39.5)	17 (44.7)	4 (10.5)
18. SorChor officers used to disseminate knowledge in environment via community radio	2 (5.3)	18 (47.4)	12 (31.6)	6 (15.8)

Table 8 Numbers and percentage on knowledge dissemination in community environmental management as per each item (continued)

Knowledge dissemination	Level of Knowledge			Never
	High	Medium	Low	
19. Have you ever thought of the role of SorChor officers whether their knowledge dissemination is appropriate ?	7 (18.4)	19 (50.0)	12 (31.6)	-
20. Have you ever thought that your own unit has enough budget for knowledge dissemination activity arrangement?	1 (2.6)	7 (18.4)	15 (39.5)	15 (39.5)

From table 8, the result has shown knowledge dissemination in community environmental management as follows:

Question 1: for knowledge dissemination to the residents in terms of rubbish management, most of the samples opine on medium level for 52.6%, high level for 31.6%, and low level for 15.8% respectively.

Question 2: For knowledge dissemination on waste water management, most of the samples opined on medium level for 57.9%, on low for 26.3%, and on high level for 15.8% respectively.

Question 3: For knowledge dissemination on green area management, most of the samples opined on medium level for 47.4%, on low for 23.7%, and for high level for 21.1%, and never for 7.9% respectively.

Question 4: For training/ seminar for community committee in terms of environmental management, most of the samples opine on low level for 42.6%, followed with medium level for 21.1%, and on high level for 15.8%, and never for 10.5% respectively.

Question 5: For campaign on cleanliness of the community, most of the samples opined on high level for 55.3%, for medium 36.8%, never for 5.3%, and on low level for 2.6% respectively.

Question 6: Campaign on rubbish segregation prior to throwing away, most of the samples opined on medium level for 42.1%, on high for 28.9%, on low for 23.7%, and never for 5.3% respectively.

Question 7: Campaign for community to keep clean their own living place and the front, most of the samples opined on medium level for 36.8%, followed with on high level and never for 23.7% equally, and on low level for 15.6% respectively.

Question 8: Campaign for people not to throw away left-over food and rubbish into the drainage and toilet, most of the samples opined on medium level and low level for 31.6% equally, followed with on high level for 26.3%, and never for 10.5% respectively.

Question 9: Campaign on shops not to throw away rubbish on the ground and in the drainage, most of the samples opined on medium level for 36.8%, followed with low level for 28.9%, high level for 21.1%, and never for 13.2% respectively.

Question 10: Campaign on shops to arrange their environment for beauty, tidiness, and order, most of the people opined on medium level for 39.5%, followed with low level for 31.6%, on high level for 21.1%, and never for 7.9% respectively.

Question 11: Campaign on tree planting and park development, most of the samples opined on medium level for 50.0%, followed with high level and low level for 21.1% equally, and never for 7.9% respectively.

Question 12: Campaign for people to perceive the benefit of available sports field, most of the samples opined on medium level for 47.4%, followed with high level for 31.6%, low level for 13.2%, and never for 7.9% respectively.

Question 13: Your SorChor has PR for knowledge or activities concerning environment on a continuing basis, most of the samples opined on medium level for 44.7%, followed with low level for 34.2%, high level for 13.2%, and never for 7.9% respectively.

Question 14: Your SorChor has organized for knowledge in new pattern, most of the samples opined on medium level and low level for 39.5% equally, followed with high level and never for 10.5% equally respectively.

Question 15: when SorChor has been trained/ gone through seminar, they will transfer their knowledge to colleagues, most of the samples opined on medium level

for 36.8%, followed with high for 31.6%, low for 23.7%, and never for 7.9% respectively.

Question 16: SorChor officers are tired with knowledge dissemination on community environmental management which needs to be said redundantly, most of the samples opined on low level for 39.5%, followed with medium level for 23.7%, never for 21.1%, and high level for 15.8% respectively.

Question 17: SorChor officers used to disseminate knowledge on environment via board in front of their office, most of the samples opined on low level for 44.7%, followed with medium level for 39.5%, never for 10.5%, and high for 5.3% respectively.

Question 18: SorChor officers used to disseminate knowledge on environment via community radio, most of the samples opined on medium level for 47.4%, followed with low level for 31.6%, never for 15.8%, and high for 5.3% respectively.

Question 19: You thought that the role of SorChor officers in knowledge dissemination is appropriate, most of the samples opined on medium level for 50.0%, followed with low level for 31.6%, on high level for 18.4% respectively.

Question 20: You thought that your unit has enough budget for activity arrangement in knowledge dissemination in environment, most of the samples opined on low level and never for 39.5% equally, followed with medium level for 18.4%, and high level for 2.6% respectively.

Table 9 Numbers and percentages in relation to the coordination for community environmental management as per each item

Coordination in community environmental management	Level of coordination			Never
	High	Medium	Low	
1. Coordination of SorChor and KorChorJor in community environmental management	13 (34.2)	18 (47.4)	7 (18.4)	-
2. Coordination with District Office or related unit in community environmental management	7 (18.4)	18 (47.4)	11 (28.9)	2 (5.3)
3. Coordination with District Office for rubbish collection in the community	13 (34.2)	9 (23.7)	13 (34.2)	3 (7.9)
4. Coordination with the committee of the community in community environmental management	16 (42.1)	9 (23.7)	12 (31.6)	1 (2.6)
5. Being the representatives for coordination between community with other units in terms of community environmental management	5 (13.2)	16 (42.1)	15 (39.5)	2 (5.3)
6. Coordination with colleagues in SorChor to solve problems in community	10 (26.3)	19 (50.0)	8 (21.1)	1 (2.6)
7. Coordination with shops to trade in the community to take care of cleanliness of the shops	12 (31.6)	12 (31.6)	12 (31.6)	2 (5.3)

Table 9 Numbers and percentages in relation to the coordination for community environmental management as per each item (continued)

Coordination in community environmental management	Level of coordination			Never
	High	Medium	Low	
8. Coordinate with news reporter in PR of the project in relation to the development of quality of life and environment	3 (7.9)	12 (31.6)	16 (42.1)	7 (18.4)
9. Coordinate with local politicians to solve the problem in community environment	8 (21.1)	13 (34.2)	10 (26.3)	7 (18.4)
10. Coordinate the network between various communities to solve community environment problem	5 (13.2)	14 (36.8)	14 (36.8)	5 (13.2)
11. Coordinate in environmental aspect with clear cut manpower / responsables	9 (23.7)	10 (26.3)	16 (42.1)	3 (7.9)
12. You have thought that staff coordinating for environmental issue are appropriate in terms of knowledge, personality, flexibility, and human relationship	8 (21.1)	13 (34.2)	16 (42.1)	1 (2.6)
13. In solving environmental problem, SorChor has determined the guideline to coordinate with related persons clearly and promptly	10 (26.3)	9 (23.7)	16 (42.1)	3 (7.9)
14. In coordinating with academicians or expert in environmental management to serve as facilitator or to disseminate knowledge to SorChor and residents	4 (10.5)	10 (26.3)	18 (47.4)	6 (15.8)
15. You believe that role in coordinating for problem solving for environment of SorChor is efficient	7 (18.4)	15 (39.5)	16 (42.1)	-

From table 9, the research result on the coordination for community environmental management, it has found out for most of the samples on medium level for 47.4%, followed with high level for 34.2%, and low level for 18.4% respectively.

Question 2: Coordination with District Office or related units in community environmental management, most of the samples opined for medium level for 47.4%, for low for 28.9%, for high for 18.4%, and for never for 5.3% respectively.

Question 3: Coordination with District Officers to collect rubbish, most of the samples opined on high level and medium level for 34.2% equally, followed with low for 23.7%, and never for 7.9% respectively.

Question 4: Coordination with community committee on community environmental management, most of the samples opined on high level for 42.1%, for low for 31.6%, for medium for 23.7%, and never for 2.6% respectively.

Question 5: Being the representatives in cooperating between community with other units in community environmental management, most of the samples opined on medium level for 42.1%, followed with on low level for 39.5%, on high level for 13.2%, and never for 5.3% respectively.

Question 6: Coordinate with colleagues in SorChor to take care of community problems, most of the samples opined on medium level for 50.0%, followed with on high level for 2.6.3%, on low for 21.1%, and never for 2.6% respectively.

Question 7: Coordinate with shops in the community to take care of cleanliness , most of the samples opined on high –medium- and low level for 31.6% equally, and never for 5.3% respectively.

Question 8: Coordinate with news reporters in PR on projects of life quality development and environment, most of the samples opined on low level for 42.1%, followed with medium for 31.6%, never for 18.4%, and high level for 7.9% respectively.

Question 9: Coordinate with local politicians to solve problems in community environment, most of the samples opined on medium level for 34.2%, followed with low for 26.3%, for high for 21.1%, and never for 18.4% respectively.

Question 10: Coordinate with network between communities to solve environmental management issue, most of the samples opined on medium and low

level for 36.8% equally, followed with on high and never for 13.2% equally respectively.

Question 11: Coordinate in terms of environment with staff supervision in a clear manner, most of the samples opined on low level for 42.1%, followed with medium on 26.3%, on high and never for 7.9% respectively.

Question 12: You thought that staff supervising environment is appropriate in terms of knowledge, personality, flexibility, and human relation, most of the samples opined on low level for 42.1%, followed with medium for 34.2%, high for 21.1%, and never for 2.6% respectively.

Question 13: In solving environmental problem, SorChor has determined the guideline for coordinating with related persons clearly and promptly, most of the samples opined on low level for 42.1%, on high for 26.3%, on medium for 23.7%, and never for 7.9% respectively.

Question 14: In coordinating with academicians or expert in environmental management serving as facilitator or disseminating knowledge by SorChor and residents, most of the samples opined on low level for 47%, followed with on medium for 26.3%, never for 15.8%, and high for 10.5% respectively.

Question 15: You thought that role in coordinating for solving problem of environment by efficient SorChor officers, most of the samples opined on low level for 42.1%, followed with on medium for 39.5%, and on high for 18.4% respectively.

Table 10 Numbers and percentages on leadership in community environmental management as per each item

Leadership in community environmental management	Leadership level			Never
	High	Medium	Low	
1. Leadership in building up relationship between colleagues	12 (31.6)	19 (50.0)	7 (18.4)	-
2. Leadership in building up relationship among residents	11 (28.9)	15 (39.5)	12 (31.6)	-
3. Leadership in promoting the participation by residents in environmental supervision	8 (21.1)	19 (50.0)	11 (28.9)	-

Table 10 Numbers and percentages on leadership in community environmental management as per each item (continued)

Leadership in community environmental management	Leadership level			Never
	High	Medium	Low	
4. SorChor used to support in activity arrangement in environment	7 (18.4)	19 (50.0)	10 (26.3)	2 (5.3)
5. SorChor is the leader in meeting with residents to know and be aware of environmental problems	7 (18.4)	17 (44.7)	14 (36.8)	-
6. You used to be the leader to brainstorm the opinion in solving community environmental problem	4 (10.5)	10 (26.3)	14 (36.8)	10 (26.3)
7. SorChor has opinion in supervision environmental problem of the community	7 (18.4)	11 (28.9)	18 (47.4)	2 (5.3)
8. When SorChor has listened to environmental problem, they react immediately	9 (23.7)	14 (36.8)	15 (39.5)	-
9. SorChor has followed up with problem solution on environmental issue in the community on a continuing basis	9 (23.7)	15 (39.5)	13 (34.2)	1 (2.6)
10. SorChor has prioritized the ranking of importance for environment	10 (26.3)	17 (44.7)	9 (23.7)	2 (5.3)
11. Sometime, environmental problem can not be solved and SorChor just let the time being the problem solver	10 (26.3)	12 (31.6)	13 (34.2)	3 (7.9)
12. SorChor officers have psychology principle to persuade people to accept and behave in terms on environment supervision	5 (13.2)	15 (39.5)	13 (34.2)	5 (13.2)
13. SorChor has the role in giving suggestion in terms of work with colleagues about environment	9 (23.7)	16 (42.1)	12 (31.6)	1 (2.6)

Table 10 Numbers and percentages on leadership in community environmental management as per each item (continued)

Leadership in community environmental management	Leadership level			Never
	High	Medium	Low	
14. When SorChor transfer the principle in environmental problem solution, the colleague can believe and understand what is said	5 (13.2)	18 (47.4)	10 (26.3)	5 (13.2)
15. SorChor has the role in managing environment of the community in a flexible manner as per the situation of the problem	6 (15.8)	14 (36.8)	17 (44.7)	1 (2.6)
16. SorChor has initiatives in new projects about the development of community environmental development	6 (15.8)	17 (44.7)	12 (31.6)	3 (7.9)
17. SorChor is the leader who trusts the community committee or residents to supervise their environment fully	20 (52.6)	10 (26.3)	6 (15.8)	2 (5.3)
18. SorChor gives importance for the arrangement of opinion box in various problems in the community in front of your SorChor	1 (2.6)	14 (36.8)	15 (39.5)	8 (21.1)
19. Overall, SorChor is the leader in promoting the environment in a good and orderly manner	11 (28.9)	13 (34.2)	12 (31.6)	2 (5.3)
20. Overall, SorChor is the role model to supervise and take care of environment for others	11 (28.9)	17 (44.7)	8 (21.1)	2 (5.3)

From table 10, the research result on leadership for community environmental management, it has found out that

Question 1: Leadership in building up relationship between colleagues, most of the samples opined on medium for 50.0%, for high for 31.6%, and for low for 18.4% respectively.

Question 2: Leadership in building up relationship among residents, most of the residents opined on medium for 39.5%, for low for 31.6%, and for high for 28.9% respectively.

Question 3: Leadership in promoting the participation by residents in environmental supervision, most of the samples opined on medium for 50.0%, on low for 28.9%, and on high for 21.1% respectively.

Question 4: SorChor used to support in activity arrangement in environment, most of the samples opined on medium level for 50.0%, on low for 26.3%, on high for 18.4%, and never for 5.3% respectively.

Question 5: SorChor is the leader in meeting with residents to know and be aware of environmental problems, most of the samples opined on medium for 44.7%, on low for 36.8%, and on high for 18.4% respectively.

Question 6: You used to be the leader to brainstorm the opinion in solving community environmental problem, most of the samples opined on low level for 36.8%, for medium and never for 26.3% equally and for high for 10.5% respectively.

Question 7: SorChor has opinion in supervision environmental problem of the community, most of the samples opined on low for 47.4%, on medium for 28.9%, on high for 18.4%, and never for 5.3% respectively.

Question 8: When SorChor has listened to environmental problem, they react immediately, most of the samples opined on low for 39.5%, for medium for 36.8%, and on high for 23.7% respectively.

Question 9: SorChor has followed up with problem solution on environmental issue in the community on a continuing basis, most of the samples opined on medium level for 39.5%, on low for 34.2%, for high for 23.7%, and on never for 2.6% respectively.

Question 10: SorChor has prioritized the ranking of importance for environment, most of the samples opined on medium for 44.7%, for low for 34.2%, for high for 26.3%, and for never for 5.3% respectively.

Question 11: Sometime, environmental problem can not be solved and SorChor just let the time being the problem solver, most of the samples opined on low for 34.2%, on medium for 31.6%, on high for 26.3%, and on never for 7.9% respectively.

Question 12: SorChor officers have psychology principle to persuade people to accept and behave in terms on environment supervision, most of the samples opined on medium for 39.5%, for low for 34.2%, for high and never for 13.2% equally respectively.

Question 13: SorChor has the role in giving suggestion in terms of work with colleagues about environment, most of the samples opined on medium for 42.1%, for low for 31.6%, for high for 23.7%, and for never for 2.6% respectively.

Question 14: When SorChor transfer the principle in environmental problem solution, the colleague can believe and understand what is said, most of the samples opined on medium for 47.4%, on low for 26.3%, on high and never for 13.2% equally respectively.

Question 15: SorChor has the role in managing environment of the community in a flexible manner as per the situation of the problem, most of the samples opined on low for 44.7%, on medium for 36.8%, on high and never for 2.6% respectively.

Question 16: SorChor has initiatives in new projects about the development of community environmental development, most of the sample opined on medium for 44.7%, followed with low for 31.6%, for high for 15.8%, and never for 7.9% respectively.

Question 17: SorChor is the leader who trusts the community committee or residents to supervise their environment fully, most of the samples opined on high for 52.6%, for medium for 26.3%, for low for 15.8%, and for never for 5.3% respectively.

Question 18: SorChor gives importance for the arrangement of opinion box in various problems in the community in front of your SorChor, most of the samples opined on low for 39.5%, followed with medium for 36.8%, for never for 21.1%, and for high for 2.6% respectively.

Question 19: Overall, SorChor is the leader in promoting the environment in a good and orderly manner, most of the samples opined on medium for 34.2%, on low for 31.6%, for high for 28.9%, and never for 5.3% respectively.

Question 20: Overall, SorChor is the role model to supervise and take care of environment for others, most of the samples opined on medium for 44.7%, on high for 28.9%, for low for 21.1%, and for never for 5.3% respectively.

Table 11 Level of role in knowledge dissemination for community environmental management of community housings' authorities

Level of knowledge	N	%
Low (8 – 24 scores)	6	15.8
Medium (25 – 42 scores)	24	63.2
High (43 – 54 scores)	8	21.1
Total	38	100.0

From table 11, an analysis for the role in knowledge dissemination for community environmental management of community housings' authorities, it has found out to be on medium level for 63.2% (average 34.5) S.D. 10.64, MIN 8 and MAX 54.

Table 12 Level of role in coordination for community environmental management of community housings' authorities

Level of coordination	N	%
Low	10	26.3
Medium	18	47.4
High	10	26.3
Total	38	100.0

From table 12, an analysis on the role in coordination for community environmental management of community housings' authorities, it has found out to be on the medium level at 47.4%, means 25.89, SD. 84, MIN 12, and MAX 45.

Table 13 Level of role in leadership for community environmental management of community housings' authorities

Level of leadership	N	%
Low	7	18.4
Medium	23	60.5
High	8	21.1
Total	38	100.0

Table 13, an analysis on role in leadership for community environmental management of community housings' authorities, it has been on medium level for 60.5%, means 35.50, S.D. 10.27, MIN 20, and MAX 57.

4.3 An analysis on comparison the differences between variables and role in community environmental management

Table 14 Comparison the differences between age and role of the authorities in knowledge dissemination in community environmental management

Age	N	\bar{X}	S.D	Sig of F
30-35 years	9	35.33	9.82	0.60
36-40 years	5	32.60	10.50	
41-45 years	5	31.80	14.87	
46-50 years	10	36.00	10.28	
51-55 years	6	38.00	12.97	
56-60 years	3	23.66	16.16	
Total	38	34.18	11.53	

From table 14 age group of 30-35 years (means 35.33), 36-40 years (means 32.60), 41-45 years (means 31-80), 46-50 years (means 36.00), 51-55 years (means 38.00), and 56-60 years (means 23.66), upon F-test, it has found out that age and the said role has no difference with statistical significance.

Table 15 Comparison the differences between educational level and role of the authorities in knowledge dissemination in community environmental management

Level of education	N	\bar{X}	S.D	Sig of F
Secondary School / PorWorChor	5	31.40	14.31	0.52
PorWorSor	3	43.33	11.23	
Bachelor's degree	29	33.62	11.24	
Master's degree/ Ph.D.	1	37.00	-	
Total	38	34.18	11.53	

From table 15, the sample in Secondary School/ PorWorChor (means 31.40), PorWorSor (means 43.33), Bachelor's degree (means 33.62), and Master's degree (means 37.00), upon F-test, it has found out that educational level and the said role has no difference with statistical significance.

Table 16 Comparison the differences between job service time and role of the authorities in knowledge dissemination in community environmental management

Job service time	N	\bar{X}	S.D	Sig of F
1 – 5 years	3	24.33	6.50	0.38
6 –10 years	6	35.66	13.83	
11 – 15 years	12	31.41	8.5	
16 – 20 years	3	37.33	8.38	
21 years over	14	37.35	13.49	
Total	38	34.18	11.53	

Table 16, age group of 1-5 years job service time (means 24.33), 6-10 years (means 35.66), 11-15 years (means 31.41), 16-20 years (means 37.33), and over 21 years (means 37.35), upon F-test, it has found out that job service time and the said role has no difference with statistical significance.

Table 17 Comparison the differences between size of community and role of the authorities in knowledge dissemination in community environmental management

Size of community	N	\bar{X}	S.D	Sig of F
1 – 10 buildings	8	34.62	9.82	0.32
11 – 25 buildings	4	29.50	23.11	
26 buildings over	9	40.55	8.04	
Total	21	36.19	12.58	

Table 17, the sample with size of community between 1-10 buildings (means 34.62), size 11-25 buildings (means 29.50), and size of 26 buildings over (means 40.55), upon F-test, it has found out that size of community and the said role has no difference with statistical significance.

Table 18 Comparison the differences between information receipt and role of the authorities in knowledge dissemination in community environmental management

Information receipt	N	\bar{X}	S.D	Sig of F
Low	19	30.47	10.84	0.02*
Medium	9	32.77	10.09	
High	10	42.50	10.62	
Total	38	34.18	11.53	

*p<0.05

From table 18, the sample with information receipt on low level (means 30.47), medium (means 32.77), and high (means 42.50), upon F-test, it has found out that the information receipt and the said role has statistical significance at level of 0.05.

Table 19 Comparison the differences between age and role of the authorities in coordination in community environmental management

Age	N	\bar{X}	S.D	Sig of F
30-35 years	9	25.66	8.23	0.97
36-40 years	5	24.80	11.77	
41-45 years	5	23.80	11.189	
46-50 years	10	25.80	9.80	
51-55 years	6	29.16	12.13	
56-60 years	3	25.66	12.09	
Total	38	25.89	9.84	

Table 19, the sample between 30-35 years old (means 25.66), 36-40 years (means 24.80), age 41-45 years (means 23.80), age 46-50 years old (means 25.80), age 51-55 years (means 29.16), and age 56-60 years (means 25.66), upon F-test, it has found out that age and the said role has no difference with statistical significance.

Table 20 Comparison the differences between educational level and role of the authorities in coordination in community environmental management

Educational level	N	\bar{X}	S.D	Sig of F
Secondary School / PorWorChor	5	24.60	12.28	0.43
PorWorSor	3	32.33	10.50	
Bachelor's degree	29	25.06	9.42	
Master's degree/ Ph.D.	1	37.00	-	
Total	38	25.89	9.84	

From table 20, the sample with educational level in secondary school/ PorWorChor (means 24.60), PorWorSor (means 32.33), Bachelor's degree (means 25.06), and Master's degree (means 37.00), upon F-test, it has found out that educational level and the said role has no difference with statistical significance.

Table 21 Comparison the differences between job service time and role of the authorities in coordination in community environmental management

Job service time	N	\bar{x}	S.D	Sig of F
1 – 5 years	3	17.33	4.16	0.05
6 –10 years	6	26.33	9.07	
11 – 15 years	12	21.75	8.95	
16 – 20 years	3	24.33	3.05	
21 years over	14	31.42	10.28	
Total	38	25.89	9.84	

From table 21, the sample with job service time between 1-5 years (means 17.33), 6-10 years (means 26.33), 11-15 years (means 21.75) , 16-20 years (means 24.33), and over 21 years (means 31.42), upon F-test, it has found out that job service time and the said role has no difference with statistical significance.

Table 22 Comparison the differences between size of community and role of the authorities in coordination in community environmental management

Size of community	N	\bar{x}	S.D	Sig of F
1 – 10 buildings	8	24.25	9.42	0.21
11 – 25 buildings	4	26.75	16.54	
26 buildings over	9	33.11	7.13	
Total	21	28.52	10.48	

From table 22, the sample with the size of buildings between 1-10 buildings (means 24.25), 11-25 buildings (means 26.75), and over 26 buildings and over (means 33.11), upon F-test, it has found out that size of community and the said role has no difference with statistical significance.

Table 23 Comparison the differences between information receipt and role of the authorities in coordination in community environmental management

Information receipt	N	\bar{x}	S.D	Sig of F
Low	19	22.94	7.83	0.16
Medium	9	27.77	11.03	
High	10	29.80	11.34	
Total	38	25.89	9.84	

From table 23, the sample with information receipt on low level (means 22.94), medium (means 27.77), and high level (means 29.80), upon F-test, it has found out that information receipt and the said role has no difference with statistical significance.

Table 24 Comparison the differences between age and role of the authorities in leadership in community environmental management

Age	N	\bar{x}	S.D	Sig of F
30-35 years	9	33.66	11.71	0.61
36-40 years	5	32.80	8.04	
41-45 years	5	30.20	10.47	
46-50 years	10	34.00	9.62	
51-55 years	6	39.16	14.81	
56-60 years	3	26.00	3.60	
Total	38	33.44	10.62	

From table 24, the sample with the age between 30-35 years (means 33.66), 36-40 years (means 32.80), 41-45 years (means 30.20), 46-50 years (means 34.00), 51-55 years (means 26.00), upon F-test, it has found out that age and the said role has no difference with statistical significance.

Table 25 Comparison the differences between educational level and role of the authorities in leadership in community environmental management

Educational level	N	\bar{x}	S.D	Sig of F
Secondary School / PorWorChor	5	34.20	13.25	0.84
PorWorSor	3	32.66	13.31	
Bachelor's degree	29	33.06	10.37	
Master's degree/ Ph.d.	1	43.00	-	
Total	38	33.44	10.62	

From table 25, the sample with Secondary School/ PorWorChor (means 34.20), PorWorSor (means 32.66), Bachelor's degree (means 33.06), and Master's degree (means 43.00), upon F-test, it has found out that educational level and the said role has no difference with statistical significance.

Table 26 Comparison the differences between job service time and role of the authorities in leadership in community environmental management

Job service time	N	\bar{x}	S.D	Sig of F
1 – 5 years	3	23.00	3.60	0.08
6 –10 years	6	36.83	12.08	
11-15 years	12	30.41	6.94	
16-20 years	3	27.66	4.04	
21 years over	14	38.07	12.23	
Total	38	33.44	10.62	

From table 26, the sample with job service time between 1-5 years (means 23.00), 6-10 years (means 36.83), 11-15 years (means 30.41), 16-20 years (means 27.66), and 21 years over (means 38.07), upon F-test, it has found out that job service time and the said role has no difference with statistical significance.

Table 27 Comparison the differences between size of community and role of the authorities in leadership in community environmental management

Size of community	N	\bar{X}	S.D	Sig of F
1-10 buildings	8	32.62	10.70	0.71
11-25 buildings	4	32.75	13.45	
26 buildings over	9	37.11	12.72	
Total	21	34.57	11.70	

From table 27, the sample with size of building between 1-10 buildings (means 32.62), 11-25 buildings (means 32.75), and 26 buildings over (means 37.11), upon F-test, it has found out that size of community and the said role has no difference with statistical significance.

Table 28 Comparison the differences between information receipt and role of the authorities in leadership in community environmental management

Information receipt	N	\bar{X}	S.D	Sig of F
Low	19	29.21	7.55	0.03*
Medium	9	36.55	12.04	
High	10	38.70	11.93	
Total	38	33.44	10.62	

*p<0.05

From table 28, the sample with information receipt on low level (means 29.21), medium (means 36.55), and high level (means 38.70), upon F-test, it has found out that information receipt and the said role has statistic significance at the level of 0.05.

4.4 Information on problems and obstacles occurred, opinion, and way to deal with problems, as well as general suggestions

From open-ended questions, obstacles, and guidelines for problem solving in community environmental management, the sample who are heads of department and their assistants have opined as follows:

4.4.1 Rubbish management

4.4.1.1 General information for rubbish management:

➤ Bangkok Community Housing has arranged for rubbish collection for 3-4 times a week. Most of the rubbish have the problem in being left-over. The sample opined that rubbish collection should be on a daily basis or at least every other day. The pattern of rubbish collection should be in 3 patterns:

Pattern 1: in case of condominium, the central office should be responsible for the cost of rubbish collection for 500 baht/ building/ month

Pattern 2: in case of community housing with no container in rubbish containing at 8 cubic meter capacity, and throw rubbish into the back of the building. Those with 240 liter capacity installed at various spots in the community, there will be a hiring for labor within the community or staff from District Office, to do the collection and segregation job prior to loading on 6-wheel truck for rubbish transfer out of the community. There will be a cost of 200-300 baht/ building/ month however.

Pattern 3: in case of community housing with container of 8 cubic meter in the community, one will employ a vehicle from District Office to collect from each building or from the spot determined by the community. There will be a cost of 500 baht/ building/month or a lump sum of 2,000-10,000 baht/ community/ month. This is dependent on the size of community and the quantity of rubbish.

➤ Community Housing in Bangkok has the container of 8 cubic meter in the community for an average of 6 pieces/ community. An exception is for those within town i.e. DinDang, Huaykwang, and Bon Kai which use 240 liter garbage or chimney for rubbish. SorChor opines that containers available are still not adequate for the use and the containers are getting old with water leakage as well. There should

be an increase for 5-10 buckets/ community. For those without any container, this type of bucket should also be available to them for convenience

➤ Community Housing in Bangkok have 240 liter rubbish can at various spots but still not enough for the rubbish amount for the residents. There should be an increase of 6 pieces/ building, and they should be wide spreadedly installed at approximate interval

4.4.1.2 Please give information on the problems of rubbish management occurred in the community as you know

a. The key problem for rubbish collection is those left-over awaiting for transfer, since officers from District Office do not collect them out of the community on a constant basis as initially agreed. Though with coordination, there is still the delay

b. Other problem is those outsiders, especially those traders in the community both are approved and those who are not from SorChor. These people always throw rubbish and unused materials on the ground or pile them till they are over the bucket. Some of them throw rubbish along the way thus create non-beautiful image. Even with warning, it is still the same

4.4.1.3 Should you be in power for community execution, what is your policy or way to deal with such problem

➤ there should be an area and container for more rubbish can all over the community. There should be a coordination with District Office for collection on a daily basis 7 days a week. There should be public relations for acknowledging the residents to segregate their rubbish on a continuing basis

4.4.2 Waste water treatment

4.4.2.1 Please give some information on waste water treatment occurred in the community as you know.

The system is in 3 ways:

1. waste water from building to sewage
2. waste water from building to waste water treatment pond to drainage
3. waste water from building to waste water treatment pond to central pond to drainage

➤ the problem is that there is no way to link the system together, since some communities have been established long time ago. Their waste water treatment were installed in front of the building. Linkage of new and old system need to set aside a budget therefore.

➤ the residents throw rubbish in the drainage and one own toilet thus there is a blockage within the building and the public drainage which produce bad smell. Shops are key rubbish throwers.

4.4.2.2 Should you be in power for community execution, what is your policy or way to deal with such problem.

➤ a budget should be approved for setting new waste water treatment to be appropriate with the size and the quantity of the population within the community. This should be in line with the campaign on the residents to use EM in treating waste water at initial stage prior to flowing down to drainage. Sample of waste water should be collected on a constant basis to solve the problem correctly.

4.4.3 Management of green area

4.4.3.1 Please give information on the problem of management of green area occurred in the community as you know.

➤ Community Housing in Bangkok mostly do not have enough green area for their residents. There is a lack of budget to improve vacant areas in the community in order to change them into green areas for further use. Trees are un-taken care of, if there is a trimming, there is also a problem of cost in getting them out of the community. This falls about 2,500 baht per trip. There is also a need to buy scissors, lawn machine, etc. which some communities do not have them.

➤ Community Housing with parks: most of them transfer the supervision duty to District Office, but with limits on budgets and man power, there is not enough staff.

4.4.3.2 Should you be in power for community execution, what is your policy or way to deal with such problem

➤ There should be tree planting activity – train people for participation and make them aware of the pollution in the community. There should be a coordination with District Office to take care of the park for beauty and tidiness. More budget should be for purchase of maintenance tools for trees

4.4.4 General suggestions

4.4.4.1 Suggestions on development of livable community , concept, and guideline for management.

- Community Housing in Bangkok should be improved for their internal environment to be a livable area. There should be training, campaign, and clarification to the residents to acknowledge the problems of community arrangement so that they can understand and cooperate in solving the problems.

4.4.4.2 What is your guideline in development of life quality in the community?

- SorChor officers mostly have the same opinion in development of life quality in the community which is to for the residents to have their jobs to earn their living before thinking about environment. Job seeking is tried before but it is not done on a continuing basis.

4.4.4.3 Upon complaints from the residents, how do you react?

- When SorChor officers have complaints from the residents, they will contact them back for understanding and for finding solution for the problems. Whatever beyond their responsibility, SorChor will coordinate with the responsables for further steps.

4.4.4.4 In conclusion, what is the key problems in community environment?

- | | |
|---------------------------|---------------------------|
| a. Rubbish | 73.68% of the respondents |
| b. Flooding | 10.53% of the respondents |
| c. Social order for shops | 7.89% of the respondents |
| d. Lack of green areas | 5.26% of the respondents |
| e. Lack of disciplines | 2.64% of the respondents |

4.4.4.5 More recommendation

- Every party should coordinate to help solve problems in order to make people see the importance in preserving environment in the community.

CHAPTER 5

DISCUSSION ON RESEARCH RESULTS

This research has studied the role in community environmental management of Community Housing in Bangkok”, so as to find out the guideline to solve environmental problem in the community. Since they have the role and they are the core of general environment management in the community so as not to create environmental problems. The objective is to know the role of the authorities in the community and to find out the factors impacting the role of the authorities in environmental management. There is a limit on the role of community environmental management in 3 aspects: knowledge dissemination and public relations, in coordination, and in leadership in the community. From an analysis of research result by test of hypothesis via percentage, means, highest value, lowest value, the researcher can discuss the result as follows:

Hypothesis 1: The role of the authorities in community environmental management are knowledge dissemination and public relations, in coordination, and in leadership in the community will differ as per age, educational level, job service time, size of community, and information receipt on community environmental management.

1. Age

From the study, it has found out that SorChor officers on head level have the average age of 46-50 years (26.3%). From the comparison of age and the role in community environmental management, it has found out that there is no difference. This is not in line with the set hypothesis. It can be analysed that though age is an indicator the capability and the decision-making in the job, operation of the community however needs experiences in solving problems directly. Head of SorCHor have been experienced in problem solving thus age does not have an effect on community management.

2. Educational level

From the study, it has been found out that SorChor officers on head level have their average education in Bachelor's degree up to 76.3%. This is in line with the policy of National Housing in opening chances for those highly educated to get important jobs but with huge responsibility. From the comparison of knowledge level and role in community environmental management, it has found out that there is no difference. This is not in line with the set hypothesis. It can be analysed that level of education of head of SorChor is one of the elements impacting the role in community environmental management. The role will be a good or a bad one depends on job service time, information receipt, and experiences in problem solving. While their education is on Bachelor's degree level, their role is not that different.

3. Job service time

From the study, it has found out that SorChor officers on head level have average of 21 years job service time or 36.8%. From the comparison of their job service time and their role in community environmental management, in terms of knowledge dissemination, public relations, and leadership, F-test statistical value has found the significant level at 0.38, 0.05, and 0.08 respectively. This can be explained that job service time or experience in job does have an impact on environmental management on high level. It is however not enough for the role in environmental management, thus education does not have the difference which is not in line with the set hypothesis.

4. Size of the community housing

From the study, it has found out that community size are mostly in 26 buildings up or 27%. From the comparison of size and role in community environmental management of SorChor officers, in terms of knowledge dissemination, public relations, and leadership, with F-test, it has found out that there is a significant level of 0.32, 0.21 and 0.71 respectively. This can be explained that size of community does not have an effect on the role in environmental management. This is not in line with the set hypothesis. It might be that the position of SorChor

heads and assistants have some adjustment and transfer among SorChor, therefore, experienced heads might have job experience both with large and small communities.

5. Information receipt

From the study, it has been found out that SorChor officers have information receipt on low level for 50%. Especially for internet, there has been no one who uses to receive information from this channel for 71.1%, followed with journal/ magazine for 31.6%.

Comparing to role in environmental management, it has found out that information receipt has an effect on role in coordination on a small basis. F-test statistics value is 0.16 which is not in line with the set hypothesis.

For the comparison of information receipt and knowledge dissemination and leadership, it has found out that the level of information receipt and role in knowledge dissemination and leadership in community environmental management differs with significant level at 0.05. This is in line with set hypothesis which explains that information receipt from media or various units enables the samples for new transferred technology on a constant basis. It is an active part to learn and practice as being trained.

Hypothesis 2: The role of the authorities in community environmental management in terms of knowledge, coordination, and leadership on medium level.

From the study, it has found out that roles of the authorities in community environmental management (for knowledge dissemination, coordination, and leadership) is on medium level for 63.2%, 47.4%, and 60.5% respectively. This is in line with the set hypothesis since role assigned from National Housing for community environmental management is in flexible manner. One can decide immediately to be in line with the key policy of National Housing which needs SorChor and Committee to have their self-regulation. National Housing will monitor only.

From the study of problems and obstacles of role in community environmental management via in-depth interview, the research can divide them into 3 aspects as follows:

1. Role in knowledge dissemination / public relations: it has found out that the samples have good knowledge with the residents on a constant basis. This is for the issues of rubbish in the community, waste water treatment, green area, etc. When it is found that there is knowledge transfer in environment for residents, the residents will attend to the problems on a short basis only. There are a number of groups which never listen to any problem issues in the community, they only stay overnight and get out to work in the morning only. SorChor can not gain cooperation from this group so far.

Some SorChor has disseminated the knowledge in environment to only one group, the are community committee. But there is no knowledge dissemination through various media i.e. board, community radio, or other campaigns for the residents to know. Even various campaigns on environment, PR has done only a few days in advance. This is due to the fact that SorChor lacks the budget in campaign activity in environment thus activity arrangement can not be done on a continuing and efficient manner.

2. Role in coordination: it has found out that the sample coordinates with many groups whose duty is related to community environmental management on a constant basis. But the coordination with external bodies for community supervision i.e. officers from District Office needs constant follow-up. These officers are in a limit number and some delay might take place. For coordination with the local residents whose timing might not be coherent i.e. SorChor officers work from morning till evening, but people and community committee work from evening to morning. There is no media used by SorChor for knowledge dissemination on environmental management so far.

3. Role in leadership: it has found out that the sample has the leadership in building up relationship within the community and promote the participation of people in environmental management. However, SorChor lacks the brainstorming from people and most of the problem solving is from heads level or their assistants. Some processes are too long and too complicated with no flexibility and some people dare not raise their concern in the group.

CHAPTER 6

SUMMARY AND RECOMMENDATIONS

From the research on “The Study of role on community environmental management of community housing authority in Bangkok” was to study roles in community environmental management on dissemination of knowledge , coordination and leadership by comparing with different variables on age, educational level, working duration, size of the community housing, receipt of the information, the level of roles in community environmental management in 3 aspects, and problems, obstacles and recommendations on role in community environmental management. As for this researcher used questionnaires to collect general information on roles in community environmental management. The researcher used in-depth interview to study general problems in each community housing and problems – solving methods. The interview was done with the samples who were chiefs and their assistants in 19 housing community for 38 respondents. The result of study is as follows:

6.1 Summary of research result

6.1.1 Personal data

The samples are heads of department and their assistants in Bangkok for 19 communities. They are in their 46-50 years of age, with their educational level of Bachelor’s degree. Their working experiences are over 21 years old. Their responsibility is for those over 26 buildings (over 8,000 units). Most of them receive information on environment from training and seminars by National Housing.

6.1.2 Knowledge dissemination on community environmental management

The samples have disseminated their knowledge to the residents and community committee, in terms of rubbish management, waste water management, and green area management on medium level.

For rubbish management, there has been a campaign for the residents to take care of the cleanliness and the segregation of rubbish prior to throwing them away. There are people in the community who are taking care of cleanliness in the room and toilet of their own but it is not adequate i.e. warning for the shops not to throw away the rubbish – food on the ground. SorChor officers still have the role on medium and low level only.

For waste water treatment, there has been a campaign on warning for people not to throw away their left-over food in the drainage around their living place on medium to low level. There has been a campaign and warning for shops in the community and outside not to throw away the rubbish and food on the ground/drainage on medium and low level. In addition, SorChor has a campaign for arrangement of environment of the shops to be tidy with social order via close supervision by SorChor.

Green area management : there has been a campaign by residents to plant trees and perceive the benefit of sports field on medium to high level.

The problem is knowledge dissemination as there is a lack of budget from National Housing to arrange for public relations activities in community environmental management.

6.1.3 Coordination in community environmental management

The samples have coordinated with various units i.e. National Housing Authorities(NHA) , District Office, local politicians , news reporters, academicians, on medium level. Perhaps there is no officers specially by SorChor for the purpose. The officers also have their personality, knowledge, and capability which are not in line with their jobs.

In coordinating with residents, SorChor officers have the most of the roles in coordinating community environmental management, specially those with their own community. SorChor officers will have convenience in supervision of residents as they can order or give the command to the committee for further cooperation.

6.1.4 Leadership in environmental management

The samples have their leadership in community environmental on medium level, in terms of their leadership in community and with their colleagues. Role of leadership is not flexible for community problem solution. As this needs experience and pattern in management which must be flexible as per the feature and priority of problems.

Psychology in persuasion by SorChor for people to believe, accept, and behave in environmental management is still on low level, as SorChor does not have a follow-up on environmental problem follow-up on a continuing basis. Thus, people do not have trust in them as they still see redundant problems occur. SorChor officers do have delay upon receipt of complaints as well.

6.2 Problems and obstacles in community environmental management

In this study, there has been an interview with the samples in order to know the problem and the obstacle of community environmental management with the housing authorities which can be divided into 3 aspects as follows:

6.2.1 Rubbish management

From the study, it has found out that the problem in rubbish management within the community has main causes as follows:

6.2.1.1 Truck from District Office can not collect rubbish as there is. Even though there is an agreement for the truck to collect the trash for certain times a week. But in practice, the truck will collect less than agreed, thus there is left-over rubbish which smells bad for the community and pass-by people.

6.2.1.2 Some community i.e. Klongtuey, BonKai, Huaykwang, are huge community where there are outsiders invade the area and take in rubbish into the community. Therefore, community has more and more rubbish which could not be collected in time. Staff on duty are also not enough, residents do not attend to the complaints or help in supervising the area.

6.2.1.3 There is a campaign in segregating rubbish prior to throwing away, but there is not enough cooperation. Perhaps there are not enough rubbish bins or some communities do not have them at all (only yellow or green bins are available). Therefore, residents do not have any necessity to segregate rubbish prior to throwing them away. Truck collecting rubbish is also those 6-wheel one (in white and blue) which segregates the rubbish prior to throwing away, but these trucks are not enough for community use.

6.2.1.4 At the back of the flat building, there are chimneys for rubbish container. Residents usually throw away their rubbish here without binding the bags, the rubbish is then spreaded around on the ground. This creates bad smell and is the place for disease. Together with the delay of the truck, problems are accumulated.

6.2.1.5 Shops in community, fresh market/ weekend market, there are usually rubbish and food on the ground. With warning, still the problems are redundant.

6.2.2 Waste water treatment

From the study, main causes of waste water treatment are as follows:

6.2.2.1 There are 2 main system of waste water treatment, one through the drainage, the other is via the waste water treatment pond (air ventilation or bacteria-cleansing) prior to the drainage. Nowadays, there is no link between the 2 systems since the budget is huge for deconstruction, extension of pipe, or new piping.

6.2.2.2 There is a recommendation to use EM in waste water treatment by training the knowledge in production to residents. There is a distribution of EM for self-use. Most of the people do not have time to produce EM water, so they usually ask for from Community Housing Office who can not produce enough.

6.2.2.3 Shops in the community, fresh market/weekend market throw away their rubbish and food on the ground, there is a blockage then in the drainage and thus waste water. There is flooding problem as well though with 1-2 times drainage pipe cleansing a year.

6.2.3 Green area management

From the study, it has found out that main causes of green area management are as follows:

6.2.3.1 Some communities : there are enough trees but there are no staff to look after them. They also lack tools and transportation cost for cut-branch transfer may cost 3,000-6,000 baht a trip which there is no budget.

6.2.3.2 There is a wrong use of green area i.e. shops invade green area for their own trade or residents use the area as car park, so others can not benefit from these areas.

6.2.3.3 Each housing has a lot of vacant land but there has been no management to turn them into sports field or health field.

6.2.3.4 There are some sports field i.e. at Ramkhamhang but they are left vacant without any attention from the housing or the residents.

6.3 Recommendations

From this study, the researcher, heads and assistants of 19 community housing (38 respondents) have mutually analysed the issues of community problems. They have also come up with guideline for problem solution on community environmental management as follows:

6.3.1 Rubbish management

6.3.1.1 Coordinating with District Officers, especially the head of cleaning and park area, for an assistance in moving rubbish away from the community, so that there is no left-over rubbish. If necessary, there should be an employment of private company to do so with a direct contract to National Housing or deal with District Office directly.

6.3.1.2 Arrange for more rubbish area: from the budget of National Housing to purchase container garbage with 8,000 liters and size 240 liters for 3 types. They are dry rubbish, wet rubbish, and toxic waste. These containers should be installed around the community. If the budget is not enough, toxic waste should be separated alone.

6.3.1.3 In case there is rubbish chimney at the front or back of the chimney, there should be some one to take care of the cleanliness with EM cleaner every time of rubbish collection so as to get rid of bad smell and so as to avoid to be the place for disease. There should also be a campaign on binding the bags prior to throwing them away

6.3.1.4 Publicize the knowledge to the residents on a continuing basis i.e. segregate the bags prior to throwing away, keep clean the rubbish area, provide container for recycled trash, public relations for the benefit on trash segregation

6.3.1.5 There should a center for trash segregation as income for residents. There should be a set up of buying center for paper, plastic, bottles, etc. with buying price. This can be an extra income for residents, it is also a way to reduce rubbish amount in the community. This center can be assigned by the agents in community to be responsible for, especially those unemployed.

6.3.1.6 Increase authority by SorChor to be able to fine those throwing away the rubbish. They can coordinate with security guard. Shops can also be fined and there has to be a receipt for this.

6.3.2 Waste water treatment

6.3.2.1 There should be a campaign on EM water for waste water treatment. This is to reduce the amount of bacteria and to get rid of bad smell in the drainage. The aim is not to have a blockage in the drainage. This principle, on weekly basis, should be enforced to each and every household owner. As EM water can be produced by the residents, it is then convenient. The campaign however should be serious and should be done on a continuous basis. Evaluation on EM water use is also useful.

6.3.2.2 Increase authority of SorChor to fine shops who throw away rubbish on the ground and in the drainage. This is also enforced to outside shops.

6.3.2.3 Shop owners should have fat pond to filter fatty material from food residue. There should be an enforcement with fine for food shops in the community

6.3.3 Green area management

6.3.3.1 Campaign on the residents to participate and to be aware of the importance of tree planting in the community though they are pot plant.

6.3.3.2 Vacant areas should have a budget, both from the government and from the private sector, to turn into health field, sports field, playground, etc. so as to benefit from the area. It is also a way to create life quality for the community, use the leisure time usefully, without relying on drugs.

6.3.3.3 Have security guard in place to take care of green area. All vacant area should be signed as area belonging to National Housing in order to use the area to fit the purpose.

6.3.3.4 Allocate size of living area (unit) per green area (square meter) in a clear cut and serious manner as per the rules and regulation of National Housing.

6.3.3.5 Set up a team to take care of the cleanliness, of trees and lawns, for once a month.

6.3.4 Guideline to develop quality of life in the community

6.3.4.1 There should be a support to government unit on a continuing basis, in order to build up an awareness of the residents for serious implementation. People should be aware of this with coordination from the government whom people trust the most.

6.3.4.2 Find job for extra income in the community, there should be a set up of occupation group, depending on facilitative factors.

6.3.4.3 Set up activities for environmental preservation so that people are aware of the importance of life quality and environment.

6.3.4.4 Train on new knowledge for living and harmonizing within the community.

6.4 Recommendation for future research

A few recommendations are as follows:

6.4.1 To expand the network of the samples more, by increase the questionnaire to those directly deal with the issue in property department, technics department, etc. Though they are not in the execution position, they know details of problem more. There should be an interview with community committee and community residents. One can get different perspective therefrom. It can serve as a guideline for better environmental management

6.4.2 There should be a study on the actual role and that expected so as to gain the reply which is the most in line with the fact occurred within the community.

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กรุงเทพมหานคร ; วิทยานิพนธ์นิเทศศาสตร์ธุรกิจมหาบัณฑิต, มหาวิทยาลัยธุรกิจบัณฑิต,
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กำจัดขยะมูลฝอย ; วิทยานิพนธ์ปริญญาวิทยาศาสตรมหาบัณฑิต, สาขาสิ่งแวดล้อม
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วิทยานิพนธ์ปริญญาศึกษาศาสตรมหาบัณฑิต, สาขาประชากรศึกษา, มหาวิทยาลัยมหิดล,
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แบบสัมภาษณ์เลขที่.....

ชื่อผู้ถูกสัมภาษณ์.....

- ตำแหน่ง หัวหน้าสำนักงานเคหะชุมชน
 ผู้ช่วยหัวหน้าสำนักงานเคหะชุมชน
 อื่นๆ (ระบุ).....

แบบสัมภาษณ์เรื่อง : การศึกษาบทบาทด้านการจัดการสิ่งแวดล้อมชุมชนของ
 เจ้าหน้าที่สำนักงานเคหะชุมชนในเขตกรุงเทพมหานคร
 ชื่อเคหะชุมชน

คำชี้แจง

1. แบบสัมภาษณ์ฉบับนี้มีทั้งสิ้น 5 ตอน กรุณาตอบให้ครบทุกข้อ
 - ตอนที่ 1 ข้อมูลทั่วไป
 - ตอนที่ 2 ข้อมูลเกี่ยวกับการเผยแพร่ความรู้ในการจัดการสิ่งแวดล้อมชุมชน
 - ตอนที่ 3 ข้อมูลเกี่ยวกับการประสานงานในการจัดการสิ่งแวดล้อมชุมชน
 - ตอนที่ 4 ข้อมูลเกี่ยวกับการเป็นผู้นำในการจัดการสิ่งแวดล้อมชุมชน
 - ตอนที่ 5 ข้อมูลเกี่ยวกับปัญหาและอุปสรรคที่เกิดขึ้น ความคิดเห็นและวิธีการจัดการกับปัญหารวมทั้งข้อเสนอแนะโดยทั่วไป
2. คำตอบที่ได้รับในแต่ละคนจะถูกเก็บเป็นความลับ ผู้วิจัยจะนำคำตอบที่ได้ไปประมวลผลเป็นส่วนรวม โดยไม่มีผลเสียหายกับผู้หนึ่งผู้ใดทั้งสิ้น
 3. ผลการวิจัยจะทำให้ทราบถึงสภาพปัญหาการดูแลจัดการสิ่งแวดล้อมชุมชนของเจ้าหน้าที่ สช.

คำจำกัดความที่ใช้ในแบบสอบถาม

- สิ่งแวดล้อมชุมชน หมายถึง ขยะ, น้ำทิ้ง – น้ำเสีย และ พื้นที่สีเขียว
 พื้นที่สีเขียว หมายถึง การปลูกต้นไม้, สวนสาธารณะ, สนามกีฬาและลานกีฬา
 ขนาดของเคหะชุมชน หมายถึง จำนวนอาคารของแฟลต ภายในเคหะชุมชนแต่ละแห่ง
 กรณีที่ สช. ไหน ไม่มีอาคารแฟลต มีแต่บ้านหรืออาคารพาณิชย์ จะคิดขนาดเป็นหน่วย
 หมายถึง ; กรุณาตอบตามความรู้สึกส่วนตัว ในภาพรวมของสช.ท่าน

ขอขอบพระคุณทุกท่านที่ให้ความร่วมมือ

คำชี้แจง : โปรดทำเครื่องหมาย ✓ ใน เพื่อเป็นข้อมูลพื้นฐานในการวิจัย

ตอนที่ 1 ข้อมูลทั่วไป

1. อายุ 30-35 ปี 36-40 ปี 41-45 ปี
 46-50 ปี 51-55 ปี 56-60 ปี
- 2.ระดับการศึกษา
 มัธยมปลาย/ปวช. ปวส./อนุปริญญา
 ปริญญาตรี ปริญญาโท/เอก
3. อายุงาน
 น้อยกว่า 1 ปี 1-5 ปี 6-10 ปี
 11-15 ปี 16-20 ปี 21 ปีขึ้นไป
- 4.ขนาดของเกษตรชุมชน
 1-10 ไร่ 11-25 ไร่ 26 ไร่ขึ้นไป
 หรือคิดเป็นหน่วย _____ หน่วย
5. ความถี่ที่ท่านได้รับข้อมูลข่าวสารเกี่ยวกับการจัดการสิ่งแวดล้อมชุมชนจากแหล่งข้อมูล

แหล่งข้อมูลข่าวสาร	ทุกวัน	สัปดาห์ละครั้ง	เดือนละครั้ง	ปีละครั้ง	ไม่เคยได้รับ
1.รายการวิทยุ					
2.รายการโทรทัศน์					
3.หนังสือพิมพ์					
4.วารสาร/นิตยสาร					
5.Internet					
6.หน่วยงาน กคช.					
7.หน่วยงานของรัฐ					
8.หน่วยงานเอกชน					
9.การเข้ารับการฝึกอบรม/สัมมนา					

ตอนที่ 2 ข้อมูลเกี่ยวกับการเผยแพร่ความรู้ในการจัดการสิ่งแวดล้อมชุมชน

การเผยแพร่ความรู้	มาก	ปานกลาง	น้อย	ไม่เคย
1. การให้ความรู้กับชาวชุมชนด้านการจัดการขยะ				
2. การให้ความรู้กับชาวชุมชนด้านการจัดการน้ำทิ้ง-น้ำเสีย				
3. การให้ความรู้กับชาวชุมชนด้านการจัดการพื้นที่สีเขียว				
4. การจัดอบรม/สัมมนาให้คณะกรรมการชุมชนด้านการจัดการสิ่งแวดล้อม				
5. รณรงค์การดูแลความสะอาดในชุมชน				
6. รณรงค์การคัดแยกขยะก่อนทิ้ง				
7. รณรงค์ให้คนในชุมชนดูแลความสะอาดในห้องของตนและหน้าห้องของตนเอง				
8. รณรงค์ไม่ให้คนในชุมชนทิ้งเศษอาหาร-ขยะลงในท่อระบายน้ำและห้องน้ำ				
9. รณรงค์ร้านค้าไม่ให้ทิ้งเศษขยะลงพื้น หรือท่อระบายน้ำ				
10. รณรงค์ร้านค้าให้จัดสภาพแวดล้อมของร้านให้สวยงาม สะอาดตา มีความเป็นระเบียบ				
11. รณรงค์การปลูกต้นไม้และพัฒนาสวนสาธารณะ				
12. รณรงค์ให้ชาวชุมชนเห็นประโยชน์ของลานกีฬาที่มีอยู่				
13. สช. ของท่านมีการประชาสัมพันธ์ให้ความรู้หรือจัดกิจกรรมด้านสิ่งแวดล้อมอย่างต่อเนื่อง				
14. สช. ของท่านจัดให้มีกิจกรรมเผยแพร่ความรู้ในรูปแบบใหม่เสมอ				

ตอนที่ 2 ข้อมูลเกี่ยวกับการเผยแพร่ความรู้ในการจัดการสิ่งแวดล้อมชุมชน (ต่อ)

การเผยแพร่ความรู้	มาก	ปานกลาง	น้อย	ไม่เคย
15.เมื่อสช.ได้รับการฝึกอบรม/สัมมนา จะมาถ่ายทอดความรู้ให้เพื่อนร่วมงานกันเองบ้าง				
*16.เจ้าหน้าที่สช.เคยเบื่อกับการเผยแพร่ความรู้ด้านการจัดการสิ่งแวดล้อมที่ต้องพูดซ้ำไปซ้ำมา				
17. เจ้าหน้าที่สช.เคยเผยแพร่ความรู้ด้านสิ่งแวดล้อมผ่านบอร์ด หน้า สช.				
18. เจ้าหน้าที่สช.เคยเผยแพร่ความรู้ด้านสิ่งแวดล้อมผ่านเสียงตามสายในชุมชน				
19.ท่านเคยคิดว่าบทบาทของเจ้าหน้าที่สช.ในการเผยแพร่ความรู้ มีความเหมาะสมเพียงใด				
20.ท่านเคยคิดว่าหน่วยงานของท่านมีงบประมาณเพียงพอในการจัดกิจกรรมเผยแพร่ความรู้ด้านสิ่งแวดล้อม				

* ข้อมูลเชิงลบ

ตอนที่ 3 ข้อมูลเกี่ยวกับการประสานงานในการจัดการสิ่งแวดล้อมชุมชน

การประสานงาน	มาก	ปานกลาง	น้อย	ไม่เคย
1.การประสานงานของ สช. กับ กคช. ด้านการจัดการสิ่งแวดล้อมชุมชน				
2. การประสานงานกับ สำนักงานเขตหรือหน่วยราชการที่เกี่ยวข้อง ด้านการจัดการสิ่งแวดล้อมชุมชน				
3.การประสานงานให้เจ้าหน้าที่เขตมาเก็บขยะในชุมชน				
4. การประสานงานกับ คณะกรรมการชุมชน ด้านการจัดการสิ่งแวดล้อมชุมชน				
5.การเป็นตัวแทนในการประสานความร่วมมือระหว่างชาวชุมชนกับหน่วยงานต่างๆ ด้านการจัดการสิ่งแวดล้อม				
6.การประสานงานกับเพื่อนร่วมงานในสช.เอง เพื่อดูแลแก้ไขปัญหาในชุมชน				
7.การประสานงานกับร้านค้า-แผงลอย ที่เข้ามาค้าขายในเคหะชุมชน ให้ดูแลรักษาความสะอาดของร้านค้า-แผงลอย				
8.การประสานงานกับผู้สื่อข่าวในการประชาสัมพันธ์ โครงการที่เกี่ยวกับการพัฒนาคุณภาพชีวิตและสิ่งแวดล้อม				
9.การประสานงานกับนักการเมืองท้องถิ่นเพื่อให้เข้ามาช่วยแก้ไขปัญหาสิ่งแวดล้อมชุมชน				
10.การประสานเครือข่ายร่วมกันระหว่างชุมชนต่างๆ เพื่อแก้ไขปัญหาสิ่งแวดล้อมในชุมชน				
11.ในการประสานงานด้านสิ่งแวดล้อม มีการจัดเจ้าหน้าที่ดูแลด้านนี้อย่างชัดเจน				

ตอนที่ 3 ข้อมูลเกี่ยวกับการประสานงานในการจัดการสิ่งแวดล้อมชุมชน (ต่อ)

การประสานงาน	มาก	ปานกลาง	น้อย	ไม่เคย
12. ท่านเคยคิดว่าเจ้าหน้าที่ ที่ดูแลประสานงานด้านสิ่งแวดล้อม มีความเหมาะสมด้านความรู้ , บุคลิกภาพ , ความคล่องตัวและมนุษยสัมพันธ์				
13. ในการแก้ไขปัญหาสิ่งแวดล้อมทางสข.มีการวางแผนกำหนดแนวทางการประสานงานกับบุคคลที่เกี่ยวข้องอย่างชัดเจนและรวดเร็ว				
14. การประสานงานกับนักวิชาการหรือผู้ที่มีความรู้ในด้านการจัดการสิ่งแวดล้อม เพื่อมาเป็นวิทยากรหรือให้ความรู้กับทาง สข. และชาวชุมชน				
15. ท่านคิดว่าบทบาทในการประสานงานเพื่อแก้ไขปัญหาสิ่งแวดล้อมของเจ้าหน้าที่สข. มีประสิทธิภาพ				

ตอนที่ 4 ข้อมูลเกี่ยวกับการเป็นผู้นำในการจัดการสิ่งแวดล้อมชุมชน

การเป็นผู้นำ	มาก	ปานกลาง	น้อย	ไม่เคย
1.การเป็นผู้นำในการสร้างสัมพันธภาพระหว่างผู้ร่วมงาน				
2.การเป็นผู้นำในการสร้างสัมพันธภาพระหว่างชาวชุมชนด้วยตนเอง				
3.การเป็นผู้นำเพื่อส่งเสริมการมีส่วนร่วมของชาวชุมชนในการดูแลสิ่งแวดล้อม				
4.ทาง สช.เคยสนับสนุนให้มีการจัดกิจกรรมด้านสิ่งแวดล้อม				
5.ทาง สช. ผู้นำในการจัดประชุมให้ชาวชุมชนรับทราบและตระหนักถึงปัญหาสิ่งแวดล้อม				
6.ท่านเคยเป็นผู้นำให้เพื่อนร่วมงานระดมความคิดเห็นในการแก้ไขปัญหาสิ่งแวดล้อมชุมชน				
7.สช.ทุกคนมีส่วนในการแสดงความคิดเห็นในการดูแลแก้ไขปัญหาสิ่งแวดล้อมชุมชน				
8.เมื่อสช.ได้รับฟังปัญหาด้านสิ่งแวดล้อมมักจะแก้ไขปัญหาในทันที				
9.ทาง สช. มีการติดตามแก้ไขปัญหาสิ่งแวดล้อมในชุมชนอย่างต่อเนื่อง				
10.ทาง สช. สามารถจัดอันดับความสำคัญของปัญหาด้านสิ่งแวดล้อมได้				
11.บางครั้งปัญหาด้านสิ่งแวดล้อมที่ไม่สามารถแก้ไขได้ ทาง สช. มักปล่อยให้เวลาเป็นตัวแก้ไขปัญหา				
12.คนใน สช. มีจิตวิทยาในการพูดโน้มน้าวเพื่อให้คนเชื่อ ยอมรับและปฏิบัติตาม ในด้านการดูแลสภาพแวดล้อม				

ตอนที่ 4 ข้อมูลเกี่ยวกับการเป็นผู้ดำเนินการจัดการสิ่งแวดล้อมชุมชน (ต่อ)

การเป็นผู้นำ	มาก	ปานกลาง	น้อย	ไม่เคย
13.สช.มีบทบาทในการให้คำแนะนำด้านการทำงานกับเพื่อนร่วมงานเรื่องสิ่งแวดล้อม				
14.เมื่อคนในสช.ถ่ายทอดแนะนำหลักปฏิบัติในการแก้ไขปัญหาสิ่งแวดล้อม แล้วเพื่อนร่วมงานสามารถเชื่อและเข้าใจที่พูดได้				
15.สช.มีบทบาทหน้าที่ในการจัดการสิ่งแวดล้อมชุมชนที่มีลักษณะยืดหยุ่นได้ ตามสภาพปัญหาของสิ่งแวดล้อม				
16.ทาง สช. มีความคิดริเริ่มในโครงการใหม่ๆ เกี่ยวกับการพัฒนาสิ่งแวดล้อมชุมชน				
17.สช.เป็นผู้นำที่ไว้ใจให้กรรมการชุมชน หรือ ชาวชุมชนดูแลสิ่งแวดล้อมกันเองอย่างเต็มที่				
18.ทาง สช. ให้ความสำคัญต่อการจัดให้มีผู้แสดงความคิดเห็นเกี่ยวกับปัญหาต่างๆ ในชุมชน อยู่ด้านหน้า สช. ของท่าน				
19.โดยรวมแล้ว สช. เป็นผู้ดำเนินการส่งเสริมสภาพแวดล้อมที่ดีและจัดระเบียบชุมชน				
20. โดยรวมแล้ว สช. เป็นแบบอย่างในการดูแลรักษาสภาพแวดล้อมให้กับคนอื่นได้				

ตอนที่ 5 ข้อมูลเกี่ยวกับปัญหาและอุปสรรคที่เกิดขึ้น ความคิดเห็นและวิธีการจัดการกับปัญหา รวมทั้งข้อเสนอแนะโดยทั่วไป

5.1 การจัดการขยะ

5.1.1 ข้อมูลทั่วไปในการจัดการขยะ :

- จัดเก็บขยะ _____ ครั้ง / สัปดาห์
- จ่ายค่าบริการ _____ บาท / เดือน
- มีปัญหาขยะตกค้างไหม
ถ้ามีควรจัดเก็บขยะ _____ ครั้ง / สัปดาห์
- มีถังคอนเทนเนอร์ใส่ขยะความจุ 8 ลูกบาศก์เมตร(ถังพักขยะ)ในชุมชน _____ ใบ
เพียงพอหรือไม่ _____
ถ้าไม่เพียงพอท่านคิดว่าควรมีเพิ่มอีก _____ ใบ
- มีถังขยะ 240 ลิตร (ถังย่อย)วางตามจุดต่างๆ ทั่วทั้งชุมชนเพียงพอหรือไม่ _____
ถ้าไม่เพียงพอท่านคิดว่าควรมีเพิ่มอีกประมาณ _____ ใบ

5.1.2 กรุณาเล่าถึงปัญหาการจัดการขยะที่เกิดขึ้นในชุมชน เท่าที่ท่านรู้

5.1.3 ถ้าท่านมีอำนาจเบ็ดเสร็จและสูงสุดในการบริหารชุมชน ท่านจะเสนอนโยบายหรือวิธีการในการแก้ไขปัญหารื้อนี้ได้อย่างไร

5.2 การจัดการน้ำทิ้ง – น้ำเสีย

5.2.1 กรุณาเล่าถึงปัญหาการจัดการน้ำทิ้ง – น้ำเสีย ที่เกิดขึ้นในชุมชน เท่าที่ท่านรู้

5.2.2 ถ้าท่านมีอำนาจเบ็ดเสร็จและสูงสุดในการบริหารชุมชน ท่านจะเสนอนโยบายหรือวิธีการในการแก้ไขปัญหาเรื่องนี้ได้อย่างไร

5.3 การจัดการพื้นที่สีเขียว

5.3.1 กรุณาเล่าถึงปัญหาการจัดการพื้นที่สีเขียว ที่เกิดขึ้นในชุมชน เท่าที่ท่านรู้

5.3.2 ถ้าท่านมีอำนาจเบ็ดเสร็จและสูงสุดในการบริหารชุมชน ท่านจะเสนอนโยบายหรือวิธีการในการแก้ไขปัญหาเรื่องนี้ได้อย่างไร

5.4 ความคิดเห็นทั่วไป

5.4.1 ความคิดเห็นเกี่ยวกับการพัฒนาชุมชนให้น่าอยู่ แนวคิด และ แนวทางการจัดการ

5.4.2 ท่านมีแนวทางในการพัฒนาคุณภาพชีวิตของคนในชุมชนอย่างไร

5.4.3 เมื่อได้รับการร้องเรียนจากชาวชุมชนท่านทำอะไรเพื่อแก้ไขปัญหาที่นั่น

5.4.4 โดยสรุปท่านคิดว่าปัญหาสิ่งแวดล้อมในชุมชน เรื่องใดสำคัญที่สุด

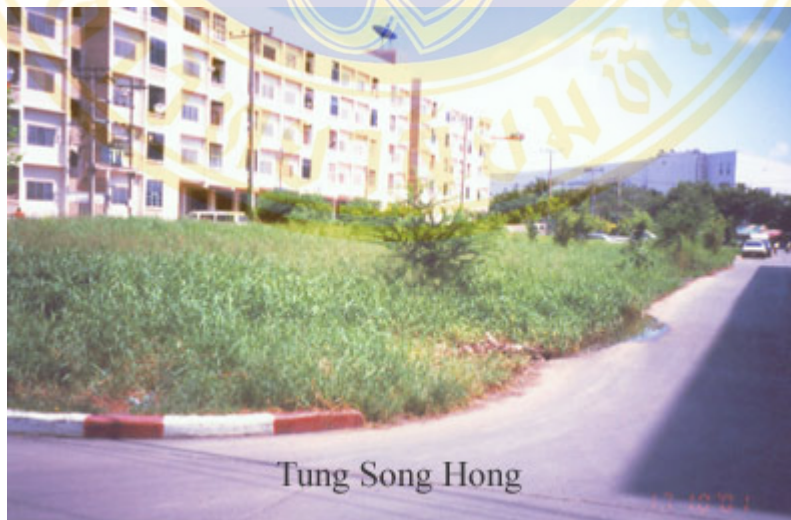
1. _____
2. _____
3. _____
4. _____
5. _____

5.4.5 ข้อเสนอแนะเพิ่มเติม

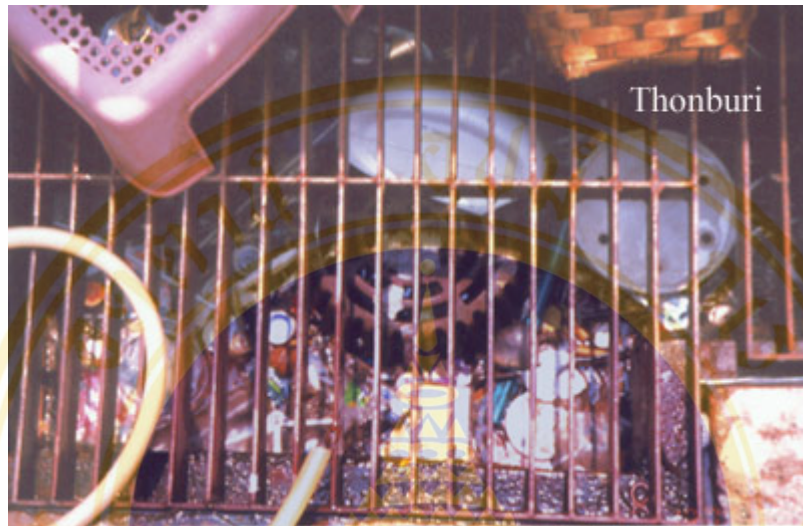


The Photo showing the environment which caused problem in the community









Thonburi



Bangchan

BIOGRAPHY

NAME	MR. KRIENKAI JULRAT
DATE OF BIRTH	November 2 nd , 1974
PLACE OF BIRTH	BANGKOK, THAILAND
INSTITUTIONAL ATTENDED	Sripratum University, 1994-1997 Bachelor of Business Administration Mahidol University, 1999-2004 Master of Education (Environmental Education)
POSITION & OFFICE	Boonrat Machinery Limited Partnership, 1992-Present Position: General Manager