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FACTORS AFFECTING PARTICIPATION AND WASTE MANAGEMENT FOR THE PEOPLE IN COMMUNITY: PHAYAPRASIT COMMUNITY, DUSIT, BANGKOK

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Abstract- This study aims to study the factors that affect the participation of citizens in waste management in Phrayaprasit community, Dusit, Bangkok and guidance affecting development in the community, how to conduct quantitative and qualitative research. The number of samples in quantitative research is 300 examples. Simple Random Sampling by conducting a survey of citizens. Qualitative Research has done by interviewing Chairmen of the community, government officers and 10 people. Guidance of waste development and management in the community. 1) Waste management includes creating awareness about waste. The result of the questionnaire, according to those interviewees show that the operation along the guidance of reducing the amount of waste. Encouraging the public to participate in reducing waste each day. The participation on waste includes collaboration solutions by encouraging the public to be aware of waste collaboration solutions properly and appropriately, reducing waste, thinking/ planning participation. The co-operation of the public in the establishment of a recycling bank, monitoring and evaluation.

Keywords- The public participation; waste management, Phrayaprasit community, Dusit, Bangkok.

I. INTRODUCTION

In the current era of growth by the social materialism, the manufacturing process is made to motivate consumers. The packaging must appeal in bright colors, and most consumer behavior commonly consumed a product that is packaged in an attractive and bright. Thus increasing the amount of waste. The waste from packaging is mostly paper, plastic, and metal which can be reused or processed causes the value of money and can reduce the use of natural resources.

[1] The problem of waste in the current year is intensifying a lot more. Due to population increases, a higher standard of living, ongoing country development, including productivity with new technology that increases waste more. And waste management in the current is a major pollution problem and needs to be solved urgently. Since the quantity of waste that occurs according to the population and the economic expansion is likely to increase every year. As responsible agencies for both central and local governments are limited in management due to a lack of personnel with knowledge, expertise, regulation and control measures or rules with the criteria set forth in a clear legal. So it is very difficult to follow as the norm. The increasing of waste each day, partly due to the emphasis on appearance and convenience in consumption, including values of consumption in the form of single use. There are also useful materials mixing in the garbage, and more difficult to find appropriate ways to eliminate. There was a pile of junk that cannot be eliminated in time, such as plastic bags, cans, aluminum, foam boxes, etc. There are many choices to eliminate waste at the present. Each choice has its limits, causing environmental

problems, including water, air, and land nearby. It can be seen that the waste resulting from us just a little bit can cause many other side effects. So, one approach to solve problems is reducing the amount of waste to disposal and awareness to the public to participate in waste separation.

[2] The mechanism of the government efforts to prevent and resolve the problem such fully. Although many issues are reduced or gone. But there are several limitations and conditions which cause some problems still appear. Make it clear that the government alone is solely responsible, not enough to the issues which have plenty of both quantitative and qualitative. The need to rely on cooperation from other agencies, such as educational institutions, non-governmental organizations. Especially in the public sector, which is numerous and located all over the area. Thus, awareness and understanding of the issues very well.

[3] The recycling bank is formed to promote waste separation, starting with people in the community so that the people in the community understand in waste separation. The principle of the waste bank is, people in the community become a membership and deposited recyclable waste at the bank. The bank officials separate, weigh, calculate, and record into the passbook. The price is based on an antique shop which is coordinated by the community members. The income of the activity comes from the difference of the price which the committee of the community determines the price that can be sold to antique shop. Including other expenses such as the cost of the publicity which can be used as working capital and to establish a Fund for the community.

[4] As mentioned above, the researcher deems that the recycling bank is an interesting project. Its purpose is to provide knowledge about waste

separation and encourages awareness and participation to help reduce waste and problems in the future. The researcher is interested in conduct research of the factors that affect participation and waste management of the citizens in the Phrayaprasit community, Dusit, Bangkok to develop higher performance and is useful for other communities. Banks refuse to establish a recycling bank in their own community in the future.

Purpose

1. To study the factors that affect participation and waste management of people in the Phrayaprasit community, Dusit, Bangkok.

2. To find the community's waste management of people in the Phrayaprasit community, Dusit, Bangkok.

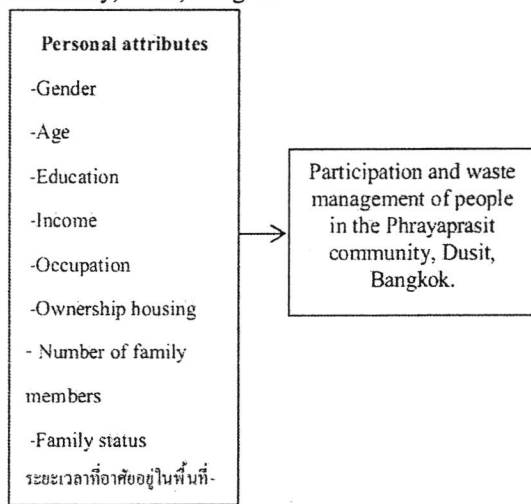


Figure 1: Conceptual Framework of study Method of the research

1. Population and sample

1.1 Quantitative Research: Examples of the respondents, number of samples 300 samples for easy navigation to calculate the statistic. The sampling method is simple random (Simple Random Sampling) by conducting a survey of each household.

1.2 Qualitative Research: is done by interviewing a chairman of the community, government officers, and people of 10 altogether to find waste management in Phrayaprasit community, Dusit, Bangkok.

2. Data analysis

1. Data Processing: The researcher will conduct interviews through the interview successfully analyze and synthesize information.

2. The data from the survey of 300 samples were taken to determine the correct manual coding. The data is then processed by computer codes, using statistical programs for the social sciences. Using a ready-made tool in statistical analysis, descriptive statistics include average (Mean), Percentage, Frequency and Standard deviation and inferential statistics such as t-test F-test Welch-test.

The research result

Analysis of factors affecting participation and waste management of the people in Phrayaprasit community, Dusit, Bangkok found that.

Chapter 1 Status and Context of the Phrayaprasit Community

Table 1: The basic context of the Phrayaprasit Community

Problems before the establishment of the recycling bank	After the establishment of the recycling bank
.1 Disposable plastic, paper and wood were dispersed roadside.	.1 Encourage awareness of the litter problem and accidents on the roads because of waste.
.2 Disposable glass, metal, plastic bottle and bag were thrown, nearby trash. It was untidiness.	.2 Know how to separate waste in order to be reused again. Gather garbage to sell to the recycling bank.
.3 Burning trash along the street in front of a house, caused a fire.	.3 Define regulations for the community to follow.
.4 Leaving garbage outside a house and the public.	.4 Educate by seminars, brochures. Motivate the citizens to keep clean their community.
5. Overflowing garbage bin.	.5 The problem of overflowing garbage bin is gone because of waste separation from the household before disposal
.6 Chemicals and organic waste were putrid.	.6 The problem of contaminated waste has decreased because of the separation of chemical and organic waste that caused a putrid smell out before throwing into a bin.
.7 The scene of the community was not beautiful.	.7 The scene of the community becomes beautiful and has no overflowing garbage bin.
.8 There was a lack of interaction or discussion about waste issues in the community.	.8 The people in the community pay more attention to the garbage problem.

Chapter 2 The analysis result of factors that affect the participation of citizens in the waste management of the Phrayaprasit community, Dusit, Bangkok.

II. THE RESULT OF RESEARCH

Respondents were mainly women of 57.5 percent, men of 42.5 percent, and aged 31-40 years of 25.25 percent, trade and private business of 39.00 percent, mostly know about waste management in the high percentage of 72.20, and a good attitude towards waste management of 84.00 percent, being highly pleased to participate of 55.75 percent and be willing to participate with the supporting factors up to 65.00 percent. While the level of participation in waste management, mostly in moderate of 43.00 percent.

The analysis of the relationship between the factors that affect the participation of citizens in the waste management in Phrayaprasit community which is shown in Table 2 and Table 3, can summarize based on the 1st assumption. The fundamentals of personal samples include family status, education level, occupation, monthly income, and the different year of habitation will participate in the community waste management which was varied significantly statistically at level 05.

Table 2: The average level of participation by the basic personal characteristic.

			x	SD	Statistics	Statistical Test	Level of Participation
1.	Gender	Male	3.83	2.42	0.785	t-test	Moderate
		Female	3.60	2.11			
2.	Age	Not exceed 30 years	3.91	2.09	1.888	F-test	Moderate
		30 – 40 years	3.48	2.19			
		40 – 50 years	4.02	2.36			
		Over 50 years	3.40	2.30			
3.	Education level	No more than primary	2.96	1.98	7.211	* F-test	Low
		Secondary School	3.24	2.40			
		High School	3.93	2.05			
		Vocational	3.71	2.51			
		High Vocational Diploma Bachelor Degree and higher	4.55	2.11			
4.	Monthly income	> 5,000 B	3.89	2.39	4.251	* Welch-test	Moderate
		5,001 – 10,000 B	3.38	2.35			
		10,001 – 15,000 B	3.21	2.14			
		15,001 – 20,000 B	4.10	2.26			
		20,001 – 25,000 B	3.55	1.31			
		< 25,000 B	4.73	2.13			
5.	Occupation	Housewife/ husband	3.31	2.39	11.454	* F-test	Moderate
		Employee	3.33	1.97			
		Seller Business owner	3.51	2.11			
		Freelance	3.46	2.33			
		Others	3.60	2.13			
6.	Habitation Status	Owned/ Spouse's	3.54	2.36	1.378	F-test	Moderate
		Parents' Rental	3.76	2.19			
		Rental	3.74	2.00			
		Others	4.32	2.09			
7.	Members	1 – 3 persons	3.50	2.34	0.940	F-test	Moderate
		3 – 6 persons	3.77	2.26			
		7 persons or more	4.03	1.74			
8.	Status	Householder	3.65	2.50	4.981	* Welch-test	Moderate
		A spouse of householder	5	2.06			
		Child/ Son or Daughter in law	3.52	1.93			
		Others	4.44	2.14			

* = Confidence Level 95%, ** = Confidence Level 99%

Table 3 Pearson correlation coefficients between independent variables with the participation

Waste Management Participation	
Knowledge and understanding of waste management.	0.197 **
Attitudes about waste management.	0.489 **
Willingness in participation.	0.379 **
Willingness in participation with a contributing factor.	0.373 **

Chapter 3 The analysis result of waste management guidance data of the citizens in the Phrayaprasit community, Dusit, Bangkok.

1. The analysis result of waste management guidance data of the citizens in the Phrayaprasit community, Dusit, Bangkok from an interview and group conversation (Focus group).

1.1 Waste management includes creating awareness about waste. The result from the analysis of the interview is shown that following the guidance of reducing the amount of waste produce, encouraging the public to participate in reducing the production of waste each day. Systematize the recycling or gather for reused. For short distances, garbage truck takes waste to the disposal site directly. And for long distances with much garbage, it may have to build a

transfer station to transfer from the garbage truck into a large truck and a disposal system with the following procedure: systematize waste separation and eliminate multiple combinations in the same area. Train in waste separation.

1.2 Participation on waste includes collaboration solutions by encouraging the public to be aware of waste collaboration solutions properly and appropriately, reducing waste, thinking/ planning participation. The co-operation of the public in the establishment of a recycling bank, monitoring and evaluation.

III. DISCUSSIONS

1. The analysis result of factors affecting participation and waste management of the citizens in the Phrayaprasit community, Dusit, Bangkok.

1.1 The factors in waste management includes knowledge of waste management.

The result from the analysis of the interview is shown that following the guidance of reducing the amount of waste produce, encouraging the public to participate in reducing the production of waste each day. Systematize the recycling or gather for reused. For short distances, garbage truck takes waste to the disposal site directly. And for long distances with much garbage, it may have to build a transfer station to transfer from the garbage truck into a large truck and a disposal system with the following procedure: systematize waste separation and eliminate multiple combination in the same area. Train in waste separation.

This is consistent with studies of Supatra Kooponethong that the public have viewed on waste management at a high level. As considering each issue found that the management of all issues is on the highest level. The first one is the issue of its community, invited the members to participate in sharing an idea, planning, performance in management. It may be because the community is knowledgeable on the subject, but it also needs to find ways to waste management within a unified community to implement the various forms of planning with emphasis on waste management for maximum efficiency. Due to reducing the amount of waste that is sent to the elimination systems. Garbage can use both reuse and processing for new applications, including the possible removal of product such as compost or energy [5]. This is consistent with the research of the Primpan Chantuma that the waste bank management has a plan, management, coordinating, and control systems. Everyone on a board of the recycling banks can perform tasks interchangeably, all positions are the critical success factors of waste bank operations [6]. Thanaporn Panacoop studied the behavior of waste management in the household of the people who live in the municipality of Pattani found that responsible unit of waste management should encourage a

knowledge of waste separation, including the creation of value by taking a bag or a basket to a market to reduce the amount of waste has solved the problem of solid waste in accordance with reality, such as increasing places that are reasonable enough for garbage at each point to increase the performance of the officials and collect waste, covering the entire municipality, including arrangements for ledger garbage receptacle. There is a need to cultivate a common sense and a degraded environment. And pollution that occurred in the municipality of Nakhon Pathom. And the relevant authorities should provide training programs to educate the public in the field of waste disposal. Especially the people who are the professional trade should be a campaign of urgent and ongoing. Due to educate about waste disposal, sorting in order to reuse them. Trash should be classified as the same. And the dissemination of knowledge about waste disposal will have to clarify about the penalty for violations and punishment together seriously [7].

Kingkan Boonma studied of the strength of the community in waste management at Baanmai-lhangmoo, Suthep, Muaeng, Chiang Mai. It is pointed out that the importance of the public took part in the community's waste management. Due to all the people are involved as well as the waste producers and are affected by the deal with a particular problem that affects the health and environmental quality. By creating public awareness and skills to individuals to engage in problem-solving of waste. This is the key principles that have helped to strengthen and developed in each age group to systematically and continuously develop [8].

1.2 The factors in participation on waste include collaboration solutions by encouraging the public to be aware of waste collaboration solutions properly and appropriately, reducing waste, thinking/ planning participation. The co-operation of the public in the establishment of a recycling bank, monitoring and evaluation.

Ratama Chaiwaiprib studied the success of the involvement of the Wat Klang community, Bangkok in waste separation for recycling, in the form of a waste bank. The research found that parents of the waste bank members aged 11-14 years, almost of them are the professional trade and the members are students. They both are aware in reducing waste at a high level, when they join the recycling bank, they can separate waste for recycling more useful than selling to secondhand traders. The participation in the activities of the recycling bank found that more than 50% of them have never done. Especially in the activities of monitoring, evaluation and participate in the activities of the beneficiaries. The hypothesis testing found that factors associated with participation in parent groups of the members under the age of 11 years, consisting of trust in the leadership, the number of household members who are members of a

recycling bank, and income [9]. The study of Sudaporn Arundee and team found that factors associated with participation in a group of recycling bank aged 11-14 years consists of trust in the leadership, the frequency of garbage sale, and awareness in reducing waste. For the index, which indicates the success of the recycling bank, Wat Klang community, Bangkok is the increasing in the following index: 1) Numbers of the recycling bank member 2) Working capital of the recycling bank 3) The frequency of waste separation 4) The amount of separated waste [10]

Callan and Thomas, 2006 study the analyzing in demand for waste disposal and recycling strategy of the system found that for many years, cities across the United States have dealt with obstacles to an increase of the Municipal Solid Waste (MSW), and a reduction in the capacity of the old landfill, which aims at promoting the reduction of waste sources and routes through recycling activities. Fehr (Fehr, 2006) studied the successful pilot project on the waste management, decentralized in Brazil and found that the pilot project has shown the kind of results that can be achieved with the decentralization of waste, which poses a financial burden to the lowest against the administration by using a model of thinking, planning in advance. It has transformed the material used for the first time referred to as material transformation of the municipality, which has tried and succeeded in a small community and has been reported to significantly change the course of the landfill without a state budget with suggestions and descriptions of potential to reduce the size of the landfill [11]

IV. RECOMMENDATIONS

1. Recommendations from research

1.1. Should focus on enhancing cooperation in all areas, whether it is waste management, developing integrated participation, public relations, training to provide knowledge about waste continuously. Off-site internship between the people in the community with the relevant agencies, whether it is the public sector, government, private sector, community development organizations, and other mass media.

1.2. Widely and continuously promote knowledge as well as the consciousness of the community about waste management, including the format of the media should be varied according to the target group to stimulate and encourage cooperation among all citizens.

1.3. Government agencies should support the community so that people can completely manage waste by competing in the environment within the community and to integrate the participation of people. The State should be established relating directly to the counseling and care for the community's waste management, which is an

incentive to make a profit for the community and society and appoints committees on the follow-up and evaluation in waste management to the public assessment report.

1.4. The citizens participate in commenting and problem-solving in waste management operations thoroughly and should be planned in a public relations campaign. Promote the introduction of waste. The citizens cooperate in waste management, and report the waste management results regularly to the public and assess continuously.

2. Recommendation for further research

2.1. Should study method and prepare a manual of waste management in each method, area or place for litter to reduce environmental problems.

2.2 Training about discipline and awareness in living with other people in the community. In order to improve on waste management.

2.3. Should determine methods of waste elimination, littering, management to solve environmental problems.

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