

The Participatory Waste Disposal of the People in Phlaichumponsub-District Municipality, Muang District, Phitsanulok Province

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ABSTRACT

The objective of this research was to study the participatory waste disposal of the people in Phlaichumpon Sub-district Municipality, Muang District, Phitsanulok Province. The data were collected by employing in-depth interviews from 379 participants in Phlaichumpon Sub-district Municipality and analyzed by using descriptive statistics: mean, standard deviation, and content analysis.

The findings in 5 facets were as follows: in terms of profit outcomes, the people of Phlaichumpon Sub-district Municipality had a good waste disposal system, shared mutual awareness and value of the waste disposal correctly, made compost or bio compost liquid from the biowaste and this can add their incomes; in terms of operation, they cooperated on paying waste collection fees; they separated wastes before disposal and recycled. In addition, they can change wastes into merit-making which enables them to help the disabled and underprivileged in the areas. In terms of knowledge, they facilitated the campaign and waste separation promotion to readjust the disposal behavior of the people into the right categories; this created awareness on waste reduction from the original sources. In terms of the decision, the administrators could reflect the participation on activity formats, drive, approve from the people and do publicity on providing knowledge, allow people to take part in designing the formats. In terms of evaluation, the people were satisfied with the project, checked and monitored the waste disposal from the original sites cooperatively, and at the end of evaluation is that the quantity of the wastes has been reduced.

Keywords: participation, waste disposal, sub-district municipality

INTRODUCTION

The problems of wastes are very problematic due to the actions of human beings regarding the waste disposal or leftover from the consumed foods. This waste has been increasing and problematic in Thailand for ages due to the increasing population, the modernized economy, and technology. Currently, scores of facilities have assisted humans more conveniently, their lifestyles have been changing and these create the leftover more and more especially in big cities and urbanized areas so the problematic wastes have caused the pollutions such as air and water pollutions which result to the stench affected public health both the respiratory system and environment and the people lack the participatory waste disposal incorrectly. In addition, the main operation previously of waste management is unaware of long-term preparation due to the constraint of budget, personnel, and equipment of the local administrative organizations and inadequacy of governmental budget allocation without continuity. Moreover, there are anti-group from the people residing around the areas which obstruct the waste disposal (Office of Secretariat of the House of Parliament: 2019)

Nowadays, Phitsanulok Province has many problems related to wastes such as the lack of participatory waste disposal, unaware of waste separation which will lead to the stench of the waste, water pollution. The more people ignore it, the more it will become problematic to the health and the environment. It has been a decade of which many units have been trying to solve the problem; however, the majority of the public have ignored the following impact which will result in the over increasing quantity of wastes and it can impact respiratory diseases and contagious diseases to people who live nearby. Nevertheless, the trucks collecting wastes sometimes cannot reach every house so they burn the wastes within their compounds without separating each category of waste so some of them might cause black smoke which definitely causes air pollution dangerous for health and environment (Division of academic and plan of Phitsanulok: 2019). If the development focusing

onparticipatory waste disposal to be successful by depending solely on the government, this seems impossible so there must be public involvement to share the provincial organization burden; that is, the provincial organization will operate the waste disposal project and one more channel is that the public should be responsible in taking part of waste disposal project in their own communities as stated and defined by Myron Weiner(Silapawich Noisommit and Chotikarn Kaenthiya: 2019).

As an aforementioned problem, the research team is very much interested in studying the participatory waste disposal of the people and participatory model on waste disposal of Sub-district Municipality of Plaichumpon, Muang District, Phitsanulok Province to develop the cooperation and seeking the model to manage waste properly; to benefit from the research result on waste reduction of the communities who would not cause the health problem, environment and reduce global warming as a whole.

RESEARCH OBJECTIVES

1. To study the participatory waste disposal of the people in Phlaichumpon Sub-district Municipality, Muang District, Phitsanulok Province,
2. To study the model of the participatory waste disposal of the people in Phlaichumpon Sub-district Municipality, Muang District, Phitsanulok Province.

RESEARCH METHODOLOGY

1. Research model

This research is a mixed-method: quantitative and qualitative research to study the participatory waste disposal of the people in Phlaichumpon Sub-district Municipality, Muang District, Phitsanulok Province.

2. Target group

2.1 The population for this study includes 7,112 participants who live in Plaichumpon Sub-district, Municipality, Muang District, Phitsanulok Province (resource: Phlaichumpon Sub-district Municipality, 2020).

2.2 The samples of this study were 379 people by using Taro Yamana's formula with the reliability of 95% and an error of + 5%.

3. Research Instrument

The research team has applied the mixed method: quantitative and qualitative research. The former was conducted through questionnaires and the latter was conducted via document study and in-depth interview. The questionnaires were administered by the subjects themselves called self-administered questionnaires and they were mainly closed-ended questions and some open-ended questions to obtain suggestions. The questionnaire was divided into 3 parts:

Part 1 contained general information of the respondents classified as gender, age, education level, career, duration of residing in the community. The questions are open-ended ones with choices.

Part 2 asked the level of participatory waste disposal of the people in Phlaichumpon Sub-district Municipality, Muang District, Phitsanulok Province by employing 5 rating scale which can be rated as follows:

most participation 5 points

much participation 4 points

moderate participation 3 points

less participation 2 points

least participation 1 point

Part 3 was open-ended questions asking for free opinions and suggestions

4. Data collection

4.1 The research team took letters to the community leaders of Phlaichumpon Sub-district Municipality to ask their permission to study with the subjects by distributing the questionnaires and doing in-depth interviews with the sample group.

4.2 The research team conducted the data collection by themselves by distributing the questionnaires to the sample group and doing the in-depth interview.

4.3 Collect the questionnaires and conduct an in-depth interview as well as check all the data for the analysis, conclude and write the research report.

5. Statistics

The research team has designated data analysis as follows:

5.1 Descriptive Statistics were employed to learn about the traits of various groups in terms of variables by using basic statistics: percentage, frequency, mean, standard deviation, and then they will present the outcomes into tables, and descriptions were presented. Descriptive analysis was concerned with these two parts as follows:

Part 1 is general data of the respondents such as gender, age, education level, career, duration of residing in Phlaichumpon Sub-district Municipality, Muang District, Phitsanulok Province.

Part 2 is concerned about the level of participatory waste disposal of the people in Phlaichumpon Sub-district Municipality, Muang District, Phitsanulok Province.

5.2 Qualitative data analysis is administered by employing descriptive analysis via the questionnaires. After the research team has gathered enough document data and fieldwork according to the objectives of the study, then they have analyzed those data for the initial analysis by classifying them according to the outline regulation and then concluded them for any further data needed. In addition, the research team has gathered data that are still incomplete as the case on the in-depth interview, they can further the interview to complete the missing issues and then they analyze the data again for the proper and accurate data. The research team also has checked the in-depth interviewed data through triangulation regarding the 2 group-personal data as follows:

Group 1, the research team interviewed the community leaders who are involved in the participatory waste disposal of the people in Phlaichumpon Sub-district Municipality, Muang District, Phitsanulok Province.

Group 2, the research team interviewed the delegations of the people and if both data were similar, that means the data were reliable.

RESULTS

The research team has analyzed the data entitled "The Participatory Waste Disposal of the People in Phlaichumpon Sub-district Municipality of, Muang District, Phitsanulok Province" as stated in the study objectives as follows:

1. To study the participatory waste disposal of the People in Phlaichumpon Sub-district Municipality, Muang District, Phitsanulok Province.

Table 1 Overall mean of the participatory waste disposal of the people in 5 facets

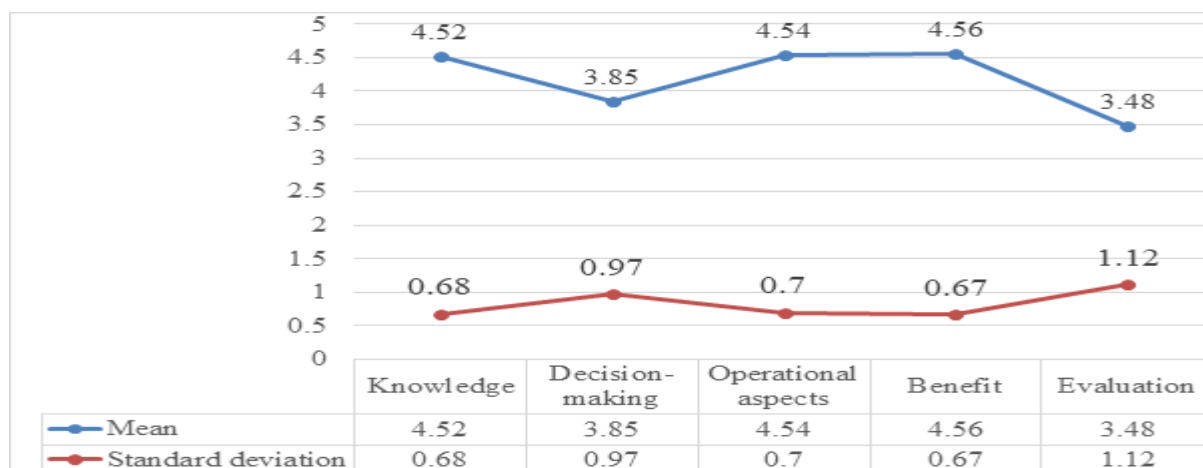


Table 1 analyzes the people's participation in evaluation overall it was at a high level ($\bar{x} = 3.48$ S.D. = 1.118). When considered by items, the item with the highest mean was the satisfaction with the waste disposal in the community ($\bar{x} = 4.48$ S.D. = 0.750), followed by the evaluation criteria for waste disposal in your community ($\bar{x} = 3.29$ S.D. = 1.262), check and monitor the waste disposal in your community ($\bar{x} = 3.22$ S.D. = 1.233), evaluate the waste disposal in your community ($\bar{x} = 3.22$ S.D. = 1.227), and the item with the least mean was you have perceived the result of waste disposal ($\bar{x} = 3.17$ S.D. = 1.122).

The results of interviewing the administrators of the Local Administrative Organization of Phlaichumon Sub-district Municipality were as follows:

1. In terms of knowledge: From the interview, it was found that the administrators have the policy about waste management from knowledge provision process, campaign and support the waste separation including collecting waste from each household hygienically and without causing pollution to families and others. They have made the colored symbols according to categories of wastes to campaign the public to know the aforementioned information and the people would have waste disposal behavior and the municipality always operates is awareness and care for health hygiene caused from the wastes. They have reviewed their plan and implement every policy to reduce the quantity of the waste to the least quantity by organizing activities like the change of wastes into the merit-making foundation.

2. In terms of decision making, it was found that the administrators used the participatory process in operating every activity via the approval of the Municipality council, approval of the public as they expect that the voice reflection would be the best-driven power in itself. To do this the administrator team has studied the people's behavior on waste separation in the area. From observation of some group of people, it was found that the people still have incorrect waste disposal behavior regarding waste categories as occurred to the waste collectors getting hurts from the broken glass and light bulbs. For this problem, the municipality has publicized to every household in the area to cooperate with the waste separation into the right categories. In part of decision making, the municipality team has opened the opportunity to the public to cooperatively develop the local continually to access the data obtained to decide on the model for appropriate activities next.

3. In terms of operation, it was found that the people have implemented the waste separation according to the municipality principles in that they have reused the recyclable wastes to make a profit such as making coffee, sweet wraps processed them and presented to the temples and some families left recyclable wastes for the municipality to use in the merit-making project and this can help the poor and disable in the areas. The administrator team, therefore, sees this as an operational success because the people have been aware and seen more value of the wastes.

4. In terms of benefit received, it was found that waste separation of the people in the area was increasingly better since it could have been the good cooperation of the administrator team and proactive of the people in the area. In addition, Phlaichumon municipality has organized activities on wastes in cooperation with both government and private sectors mutually driven more concretely and pertinently in that some families make their own landfill for the waste disposal especially the leftover food which is good ideas and for a long-term result. In the past, the people left the wastes in the metal bins and they have become deteriorated and the wastes have caused stench; some dogs have scavenged the wastes and created unpleasant atmospheres. This could lead to the disease carrier; however, currently, the households in the municipality area have been instilled such awareness and mutual values on waste separation correctly so the benefit receivers are the people themselves.

5. In terms of evaluation, it was found that Phlaichumon municipality has checked and monitored the waste disposal systematically, they have the policy expressing their intention and expectation towards the waste management which has been reflected through designating policy, plan, project, and various activities. In part of the implementation, the municipality has evaluated from the beginning of the tunnel in that the people's participation, knowledge, and apprehension building on waste separation including the evaluation at the end of the tunnel; that is, the quantity of the wastes has been reduced in the area.

2. To study the model of participatory waste disposal of the people in Phlaichumpon Sub-district Municipality, Muang District, Phitsanulok Province.

From the research site study, the research team has obtained the model of waste disposal of the people in the area by modifying the model and participatory characteristics of academic Thawinwadee Burikun (2008) and has designated the people's participatory process with the full circulation of which vital components can be divided into 5 stages as follows:

Stage 1 Find the condition of participatory waste disposal of the People in Phlaichumpon Sub-district Municipality, Muang District, Phitsanulok Province.

Stage 2 Participatory planning comprised perception, access of data on planning, activity planning by cooperating with community representatives, government sector, local leaders, youth representatives, school representatives, temple representatives, shop representatives, and private sectors who reside in the municipality area. They come to share ideas, work, plan together which is a network building to set up the community plan on waste management.

Stage 3 Participatory operation/implementation comprised activity organization related to every sector as well as deciding on selecting appropriate activities for each area that meets with the public needs mainly.

Stage 4 Participation in benefit allocation is the sharing of benefits or outcomes of the activities or the decision made which led to mutual sharing eventually brought in the cooperation among groups of people along with the good exemplification of the future operation.

Stage 5 Participatory evaluation concerning the effort in project and activity evaluation, the research team has considered to continue the operation and allow the public to think about the evaluation criteria on projects or activities and this will become the input in the first participatory process which is to seek the problematic condition of the waste disposal as follows:

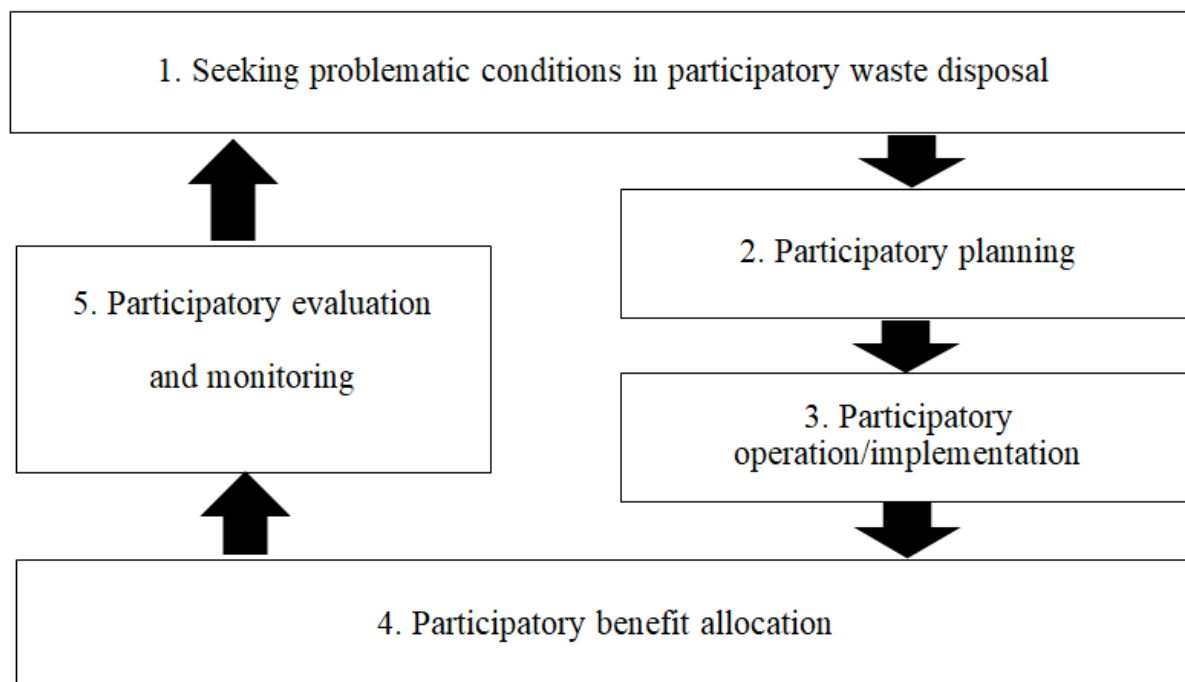


Figure 1 Model and characteristics of public participation in Phlaichumpon Sub-district Municipality, Muang District, Phitsanulok Provincemodified from Thawinwadee Burikun (2008)

DISCUSSION

The research results entitled “The Participatory Waste Disposal of the People in Phlaichumpon Sub-district Municipality, Muang District, Phitsanulok Province” were discussed as follows:

The research found that most of the people who participated in the waste disposal were females aged between 51-60 years old, being agriculturalists, obtaining primary school education, staying in the

area over 20 years, and getting married. From the general data on personal classification, the research team has learned that the participatory waste disposal of the people in each facet by using the participatory components as follows:

1. In terms of benefit receiving, the people have benefited from the participation at the highest level since the waste separation makes the community clean, neat and tidy, lively; reduces waste burning and air pollution. After they have separated the wastes, they can make compost from organic wastes or bio-fermented liquid and some of the solid wastes like bottles can be sold as recyclable wastes to increase their incomes. The project has helped people be self-disciplined. From the research, the people who receive the benefits from the waste separation in the area called Ban Khlong Tarn were at the highest level which was consistent with the research paper of Siriporn Tatsana and Chot Bodeerat (2015, abstract) who studied the participation on wastes disposal in the areas of Phitsanulok Municipality and found that using similar theory and research framework can have different outcomes due to the different sample size.

2. In terms of operation, the people took part in the operation at the highest level because they participated in the waste separation project at Sub-district Nong Khaem Local Administrative Organization and they have disposed of the wastes at the spot provided by Nong Khaem Local Administrative Organization. In addition, they have paid the wastes collection fees to the organization and they also separated wastes before discarding them by putting them into bags as categorized. From the research, the research team has learned that the people who participated in the waste disposal operation at Ban Khlong Tarn were at the highest level which was consistent with the research paper of Rathaphon Sithamma and Kewalin Seelphiphat (2016) who studied the participation and effectiveness on waste management of Khao Phra Ngam Sub-district Municipality, Muang District, Lop Buri Province and found that the observation and analysis were quite similar.

3. In terms of knowledge, the people who participated know how to at the highest level since they know how to benefit from the wastes into money, classify wastes into the right categories, learn how to dispose of wastes hygienically, learn how to benefit from the leftover food and learn the color symbols as categorized wastes. From the research results, the research team has learned that the people having the knowledge how to separate wastes at Ban Khlong Tarn at the highest level which was consistent with the research paper of Natthawut Sap Upatham and Apaporn Minwong (2018) who studied the participation of people on waste elimination of Phup Phla Sub-district Municipality, Muang District, Chantha Buri Province and found that they shared similar questionnaires.

4. In terms of the decision, the people took part in the decision at a high level since they were allowed to plan on the waste disposal, to observe the waste disposal behavior of the people in the community, to attend the meeting to hear the problematic wastes of the community and to share ideas in waste disposal. From the research results, the research team has learned that the people took part in decision making at a high level which was in line with the research paper of Patsarin Phannaen (2015) who studied the children and youth's participation in waste management at Ban Mankhong Bang Bua Community, Bang Khen District, Bangkok and found that the people were similarly satisfied with the waste separation in the community.

5. In terms of evaluation, the people took part in decision-making at a high level since they were satisfied with the outcomes of the waste management of the community. They also made the criteria for waste separation evaluation; checked and monitored the waste separation; evaluated the waste separation and informed the community. From the findings, the research team has learned that the people took part in the evaluation at a high level which was in line with the research paper of Phra Maha Niphan Paripunnano (2019) who studied the people participation in waste management of the community at Thung Looknok Sub-district, Kamphang Saen District, Nakhon Prathom Province and found that they shared the consistent evaluation questions.

SUGGESTIONS

From the research entitled "The Participatory Waste Disposal of the People in Phlaichumpon Sub-district Municipality, Muang District, Phitsanulok Province" the research team has suggestions as follows:

1. The local organization should organize the village community stage in each area to provide knowledge or consult on waste disposal.
2. The local organization should support people and allow them to participate in sub-district waste separation projects to reduce the burning waste problem.
3. The local organization should make the evaluation form on the waste separation project and inform them after the evaluation has been done.

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