

Role of TPST in Waste Management (TPST Study in Pamulang Sub-District Area of Banten Province)

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ABSTRACT. The purpose of this research is to find out the role of TPST and TPST strategy in waste management in Pamulang Sub-District area, South Tangerang and to describe waste management and what factors support and hinder the application of waste management. This research method uses qualitative methods, namely with data collection techniques through observation, documentation and interviews. Meanwhile, the interviews the research involved informants who were the chairman of TPST, workers, residents around TPST from various TPSTs located in Pamulang Sub-District. Among them TPST Rumah Kompos VPM, Vipamas, Ciledug Sejahtera, Gurame 01, Bambu Apus, Jabon Asri, Ketapang 5, Griya Bersih Asri, Liberal, Flamboyant, and TPST Puri Resik. The results of the analysis from interviews were obtained from informants, and based on SWOT analysis of TPST waste management Pamulang Sub-District determined 4 (four) strategy scenarios, with the definition of each strategy is; 1. Strength Strategy - Opportunity (SO) is defined by the term Infrastructure Improvement Strategy; 2. Weakness Strategy, Opportunity (WO) defined by the term Investor Participation Strategy in the Development and Operation of TPST; 3. Strength - Threat (ST) Strategy, defined by the term Community Participation Improvement Strategy; 4. Weakness-Threat Strategy (WT), further defined by the term Human Resource Quality Improvement Strategy.

Keywords: *Strategy, SWOT, TPST, Pamulang.*

1. INTRODUCTION

1.1 Background Issues

Landfill (Landfill) which is now called The Final Processing Place, until now was the mainstay for all urban managers in Indonesia in dealing with the onset of garbage in their respective cities. However, city managers tend to pay less attention to landfill, resulting in various landfill problems such as landfill sites, water and air source pollutions, landslides and others. This problem is also faced by Pamulang Sub-District consisting of eight villages namely Pondok Benda Village, Benda Baru, Bambu Apus, Kedaung, Pamulang Barat Pamulang Timur, Pondok Cabe Udik, and Pondok Cabe Ilir Village. The enacting of Law No. 18 of 2008 on Waste Management states that waste management with open disposal in landfill is no longer allowed. In accordance with the Law, garbage must be processed first, before being returned to environmental media safely for humans and the environment.

With the law, the role and function of TPST (Integrated Waste Treatment Plant) is very important and extensive, namely covering waste reduction and handling activities, even the final processing activities can be done in TPST. TPST location can be at the source of garbage and can also be at landfill location, so the capacity can be small, medium and even large, depending on the availability of land at TPST location and the amount of garbage arising to be processed. Therefore, the role and function of TPST can run optimally in line with the expectation of Law No. 18

of 2008, instead the burden of landfill that has been almost the only place to handle garbage is expected to be lighter, with the onset of garbage processed in TPST so that that that should be disposed to landfill becomes reduced.

Therefore, it is necessary to emphasize the role of TPST in every village in Pamulang sub-district to reduce waste disposal in landfill. With the research title "Role of TPST in Waste Management in Pamulang Sub-District Area of Banten Province"

1.2 Formulation of Problems

How TPST's role in making the environment safe and comfortable What strategies can be used for good waste management

1.3 Research Objectives

To know the role of TPST in making the environment safe and comfortable in Pamulang District South Tangerang. To know the strategy of waste processing in TPST in Pamulang District South Tangerang

1.4 The Foundation Of Theory

1.4.1 The Meaning of Garbage

Garbage is an item that is considered unused and discarded by the previous user, but for some people can still be used if managed with the correct procedure [1]. Garbage buildup is caused by several factors, including the volume of garbage that is so large that it exceeds the capacity of landfill capacity (Landfill).

Waste management that has occurred so far is perceived to have no positive impact on the environment, and less policy support from the government. According to Prof. Dr. Ir. Ign. Suhatro in the book *Chemical Waste* (2011) says the government has not been so serious in thinking about this waste problem. Although the government has made some breakthroughs but in some temporary landfills (TPS) the mountain of garbage is still very disturbing to the community and still a concern for Principles of Waste Management.

The Following Waste Processing Principles are principles that can be applied in waste processing. These principles are known as 5M [1], namely: 1. Reducing the use of consumables that can cause garbage because the more waste, the more garbage there will be. 2. Reuse seeks to find reusable items, and to avoid the use of disposable goods to maximize the lifespan of an item. 3. Recycle in addition to looking for reusable goods, you can also look for recyclable goods, so that the goods can be used instead of being garbage. 4. Replace this method can be done by making observations around. Replace 11 disposable items with more durable items, and use eco-friendly items. 5. Appreciatively, this method uses a love of nature, so it will give rise to a wise attitude before choosing.

1.4.2 The Urgency of TPST Existence

According to Law No. 18 of 2008, the so-called TPST is the place where garbage collecting, sorting, reusing, recycling, processing, and final processing activities are conducted. Based on these definitions, the role and function of TPST are very important because many can be done in TPST, including reducing waste and handling activities, even the final processing activities can be done in TPST. TPST location can be both at the sources of garbage and at the landfill location, so the capacity can be small, medium and even large, depending on the availability of land at TPST location and the amount of garbage arising to be processed. Thus, if the role and function of TPST can run optimally in accordance with the expectations of Law No. 18 of 2008, then the burden of landfill, which is almost the only place to handle garbage, can become lighter because of the onset of garbage processed in TPST which should be disposed at landfill can be reduced.

Activities carried out at TPST only sort garbage to separate valuable an-organic waste, collect it and finally sell it. Another approach is to enable TPST as a recycling or processing of an-organic waste. Given the small amount of an-organic waste, it is necessary to supply an-organic waste from outside, cooperate with raw material supply companies or cooperate with scavengers. Along with TPST policy, high percentage of organic waste should be able to be recycled or

processed in advance at TPST. If implemented, then at least 50 per cent of the garbage can be processed at TPST, so that the remaining waste is discarded to landfill only 50 per cent. In addition, the benefit that can be obtained to reduce the burden of landfill is the efficient garbage transportation. In particular paper waste based on the classification of garbage including organic waste, but characteristically paper waste such as an-organic waste, i.e. has economic value so that it includes those taken by scavengers. Therefore, processing the paper waste at TPST is the same as processing organic waste.

1.4.3 SWOT

SWOT Analysis (Strengths, Weaknesses, Opportunities and Threats) is a technique or tool used to find suitable strategies for a company or organization. This analysis covers the internal and external environment of a company or organization. SWOT analysis that has 4 benefits for decision makers in making strategies; 1) simplicity: SWOT analysis does not require special training or technical skills; 2) collaboration: simply put, SWOT analysis encourages cooperation and information exchange between managers from different functional areas; 3) flexibility: can improve the quality of organizational planning strategy even without a marketing information system; 4) integration: SWOT analysis can relate to a wide range of sources of information.

2. RESEARCH METHOD

2.1 Research Methods

In this study, the research approach used is to use qualitative methods. According to Mas'Adi [4], "Qualitative research is aimed at gaining a deep understanding of the situation at hand." As for according to Sugiono [5] "Qualitative research is where researchers as a key instrument."

2.2 Data Collection Methods

According to Sugiyono [6] "In data collection techniques is the most important step in research, because the main purpose of research is to obtain data, without knowing the data collection technique, then researchers will not get data that meets the established data standards." Data collection techniques, among others.

2.3 Observation

Observations were made to obtain data on SWOT waste processing strategy at TPST Pamulang Sub-District. Observation is a data collection technique with specific features when compared to other techniques, such as interviews and questionnaires. "If interviews and questionnaires always communicate with people then observation is not limited to people, but also other natural objects." [5]

2.4 Documentation

According to Arikunto [7] "Documentation is to search for and collect data on things or variables in the form of notes, transcripts, books, magazines, agendas, meeting minutes, and so on." Documentation techniques are used to obtain secondary data.

2.5 Interview

Interviews are used "As a data collection technique if researchers want to conduct preliminary studies to find problems that need to be studied, and also if researchers want to know the things of the respondents that are more in-depth and the number of respondents is small or small." [5]

2.6 Data Analysis Methods

The data analysis technique is "Describing what analysis techniques are used by researchers to analyze the data that has been collected." [9]

Data collection

Data collection in Mas'adi [4], namely "Collecting data at research sites by conducting observations, interviews, and documentation by determining

strategies for collecting data that is seen as appropriate and to determine the focus and deepening of data in the next data collection process."

2.7 SWOT analysis

Identifying internal and external factors (SWOT components) obtained by using observation methods, is done by observing directly the activities in the region or around the area related to this practice as well as the method of interviewing and disseminating questionnaires containing key questions to find out the waste processing strategies in 11 TPST in Pamulang Sub-District. The formulation of both factors can be described in the form of SWOT matrix and the strategies obtained are SO, ST, WO and WT (Table 1)

TABLE 1. SWOT and TOWS matrix

Internal Factors External Factors	strengths	weaknesses
(opportunities)	SO Strategy Creates strategies that use power by leveraging opportunities	WO Strategy Creates strategies that minimize weaknesses by leveraging opportunities
(Threats)	ST strategy Creates strategies that use power to overcome threats	WT strategy Creates strategies that minimize weaknesses and avoid ancaman

Data reduction

Researchers sort data by choosing which data is interesting, important, useful and new. The data are grouped into various categories defined as research focus.

Data presentation

Data presentation is a set of information organizations that enable research to be conducted. The presentation of data is obtained in various types, networks of work, related activities or tables.

Drawing conclusions,

Drawing conclusions means that in data collection, researchers must understand and respond to something studied directly in the field by compiling briefing patterns.

Findings Validity Check

According to Mas'adi [2], "In addition to analyzing qualitative research data as an instrument, researchers' participation is very decisive in collecting data, so the data can be obtained". Here, in checking the validity of

these findings, the authors conducted interviews to informants namely TPST leaders, workers, and local residents of 11 TPSTs in Pamulang Sub-District of South Tangerang directly. And to establish the validity of this data, a vetting technique was required. Thus, in this study, researchers used techniques to determine the validity of data by holding the following activities:

Triangulation

Triangulation in Mas'adi, [2], "It is a way to see phenomena from multiple angles, namely to prove findings with various sources of information and techniques." For example, the results of observations can be checked by interviewing or reading reports and looking more sharply at the relationship between different data. Researchers obtained data on "SWOT Analysis as the Basis for Determining Waste Processing Strategy" from interviews with informants, namely TPST Chairman, workers, and local residents in 11 TPSTs in Pamulang Sub-District of South Tangerang City. Researchers in this case did not only

interview the informants but also needed some official documents to ascertain the veracity of the activities.

Using reference materials

In order to improve the validity and correctness of the data researchers use the results of recorder recordings and documentation. Researchers need data on SWOT analysis of Waste processing in the 11 TPST, from informants using recorder recordings and documentation. Providing check aims for information obtained and used in thesis research in accordance with what the informant means." [3]

Based on the results of interviews and observations from several Informants; The chairman of TPST, workers, and local residents in 11 TPSTs in Pamulang District of South Tangerang City (TPSTs of Rumah Kompos VPM, Vipamas, Ciledug Sejahtera, Gurame 01, Bambu Apus, Jabon Asri, Ketapang 5, Griya Bersih Asri, Liberal, Flamboyan, and TPST Puri Resik), some strategic factors that are very influential on waste processing in TPSTs could be obtained. The strategic factors were divided into two: 1) Internal factors that included strengths and weaknesses, 2) external factors that included opportunities and weaknesses

3. RESULT AND DISCUSSION

TABEL 2. SWOT Internal Factor Analysis

(strengths)	Government support by equipping facilities and infrastructure (hangars/buildings in public facilities, number machines, sifting machines, vehicles, and garbage dumps.
	The structure of workers in TPST is complete, from the caretaker to the complete worker and according to the number of customers (head of the family)
	Support and approval from residents around TPST, with waste processing activities by TPST
(weakness)	Maintenance of facilities and infrastructure is carried out independently, less attention from the government.
	Self-help funds from citizens and administrators
	Weak understanding of residents to sort organic and non-organic waste from the house
	Old waste residue stored in TPST

TABEL 3. SWOT external factor analysis

(opportunities)	Non-organic waste management that is economically valuable, thus increasing income for TPST
	Sales of compost that can still provide additional income
	Full support of citizen if they need additional funds
	The establishment of TPST in public facilities land, making TPST party comfortable in its operational activities
(threats)	Corrosion caused by organic waste
	That may damage facilities and infrastructures of TPST.
	Hand-sorting organic and non-organic waste
	Potentially "distorted" management

TABEL 4. SWOT And TOWS Matrix

Internal factors External factors	strengths	weaknesses
opportunities	SO strategy A strategy that uses power by leveraging opportunities	WO strategy a strategy that minimizes weaknesses by taking advantage of opportunities
	1. Improvement of facilities and infrastructure 2. utilization of eco-friendly technology	1. Establishment of proper waste management rules 2. Establishment of a special waste management agency
Threats	ST strategy a strategy that uses force to overcome threats	WT strategy a strategy that minimizes weaknesses and avoids threats
	1. Increased community participation 2. Increased cooperation with the City Government	1. Promoted the TPST 2. Decentralized program for waste processing

4. CONCLUSION

Based on the TOWS matrix, waste management of TPST Pamulang Sub-District was determined by 4 (four) strategy scenarios. The definition of each strategy is as follows:

- 4.1 Strength Strategy - Opportunity (SO),** *this strategy used the power to improve TPST asset management in Pamulang Sub-District, defined by the term Infrastructure Improvement Strategy, with the following actions:* Improving the quality of facilities and infrastructure and Good utilization of facilities and infrastructure
- 4.2 Weakness Strategy - Opportunity (WO),** *this strategy minimized weaknesses to take advantage of opportunities in TPST management in Pamulang Sub-District, defined by the term TPST Development and Operation Strategy, with several actions:* Promoting the potential management of valuable economy assets of TPST and Conducting a study of the TPST's economic potential assets by involving academics and investors.
- 4.3 Strength - Threat (ST) strategy,** *this strategy used the strength of long-term opportunity utilization in TPST asset management in Pamulang Sub-District, defined by the term Community Participation Improvement Strategy, carried out with the following actions:* Socialization of the importance of involvement in waste management and Campaign about 3R (reduce, reuse and recycle), so that people can apply in their environment.
- 4.4 Weakness-Threat Strategy (WT),** *this strategy is carried out by minimizing weaknesses and avoiding challenges in the management of TPST in Pamulang Sub- District, hereby defined by the term Human Resource Quality Improvement Strategy, carried out with the following actions:*

Selective hiring of employees and Conducting coaching and career development of employees

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