

Demands for 3R Waste Dealers towards Waste Bank Service Facilities in Semarang District Region

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ABSTRACT

The purpose of this study was to determine: (1) the objective conditions of the facilities and service staff of the Waste Bank in the Semarang Regency environment, (2) the level of customer demand for 3R waste dealers regarding the facilities and services of the Waste Bank in the Semarang Regency area, and (3) various facilities and the service requested by 3R waste dealer customers in the Semarang Regency. The research approach is descriptive qualitative, the technique of data collection was conducted by 1) questionnaire, 2) in-depth interviews, and 3) observation is involved, while the analysis technique is descriptive-statistics. The results of the conclusions showed that: 1) the objective condition of the facilities and services of the waste bank in the Semarang regency area is still concerning and has not been far from the expectations of 3R customers. There are 3 places raised here as a result of the research, namely Kelurahan Bergas Kidul Waste Bank, Kelurahan Sidumulyo Waste Bank, Kelurahan Ungaran Waste Bank, 2) the level of 3R waste distribution customer requests for Waste Bank facilities and services to be improved, and 3) Facilities and the service desired by 3R waste dealer customers at a garbage bank that is packaged in accordance with the correct 3R selection, which is convenient, safe, and avoids hazardous waste, including environmental cleanliness around the Waste Bank.

Keywords: Waste Distributors, Waste Bank Service, reduce reuse recycle

INTRODUCTION

Waste piles become an inseparable part of life as a consequence of the existence of human life activities. Waste is leftover material undesirable after an expiration process can be in every phase material: solid, liquid, or gas (emission), ordinarily associated with pollution. Waste is a consequence of human activities (Banowati, 2012). Population growth in urban settlements raises waste management problems ranging from waste generation problems, the need for a final waste processing site, and the environmental costs incurred (Setiadi, 2015).

Waste can be used and can prosper the community by processing it again. One of the efforts by holding a waste bank. A waste bank is one of the strategies the application of 3R (reduce, reuse, and recycle) in waste management at the source at the community level (Saputro, 2015).

A waste bank is a place that is used to collect waste that has been sorted, the results of the collection will be deposited to craftsmen or rubbing. The waste bank is managed using a system as the voluntary staff or cadres do. The depositor is a resident who lives around the location of the waste bank and gets a passbook like at the bank. The implementation of the waste bank in principle is one social engineering to engage the community sort waste (Saputro, 2015). There are already several waste

banks in the Semarang Regency environment that make use of waste into something that can bring benefits to themselves, family members, and the surrounding community.

The name of the waste bank in the area is "Bank Sampah Mugi Berkah Kelurahan Bergas Kidul". Aziz, as the manager, said that the beginning of the existence of the Trash Bank was when residents were concerned about the waste that was littered in their waste disposal without any accountability from the community, especially during the rainy season, channels that were clogged with waste caused the waste to be carried by the water to the road. Finally, residents think about how the problem of waste can be overcome and produce value financially. This trip is also similar to Bank Sampah Sidosari Jaya Sidomulyo Village, and Bank Sampah Penyu Makmur Ungaran Village.

Law of the Republic of Indonesia Number 18 of 2008 about Waste Management said Waste management with the new paradigm done with waste reduction and handling activities. Waste reduction includes restriction activities, reuse, and recycling, meanwhile Waste management activities include sorting, collection, transportation, processing, and final processing. The way to manage waste is by choosing solid waste that has a sale value, therefore to meet the demands of the community the problem of waste that has no sale value after being sorted out residuals of residents trying to coordinate with DLH (Office of Environmental Services), and working with ruffled customer distributors to waste management and procurement of tools for waste that have no sale value.

At present, the management of Waste Banks also prioritizes sales (the economic value for citizens) hoping that the community can enjoy the results of the waste that have been collected and taken by shattered customer dealers, such as Bank Sampah Mugi Berkah, Bank Sampah Sidosari Jaya, and Bank Sampah Penyu Makmur trying to prosper the community.

although not as optimal as expected, due to lack of human resources and a lack of public awareness to care about waste, and properly managed waste will result in higher rupiahs while simultaneously manifesting maximum environmental cleanliness that can have an impact on public health.

Waste bank programs, help the government to reduce the volume of trash and already give a good impact on society and the environment (Saputri, 2015). The waste bank is a sector that is engaged in services that are concerned with the quality of service by providing facilities that can meet the demand of 3R waste dealers. But in general, the field of waste bank services is still new for most of the waste bank business managers in certain areas. Usually more focused on the importance of physical form collected sold.

In the field of waste bank services, the service aspect is the main indicator of 3R waste dealer customer facilities. Unfortunately, waste bank customers, in general, are still reluctant to choose optimally, to fulfill 3R dealer services to obtain satisfaction with the services purchased. Therefore service improvement is a necessity to improve the quality of services sold to customers of waste dealers. Some of the main pressures in improving services require 1) increasing the collection of 3R waste in waste banks with services arranged in terms of waste disaggregated according to type and neatly packaged, 2) development of equipment and equipment needed in service, and 3) development of the customer itself related to development attitude, behavior, and skills (Dwiyanto, 2011). A satisfying service effort is indeed an art in itself, however, to be able to provide good service requires knowledge.

Waste management is a form of good cooperation between the local government and its citizens. The district government needs to develop a system that encourages people to be actively involved in waste management that is environmentally friendly and based on 3R (reduce, reuse, recycle) (Dyah, 2012). Community concern

in waste management in residents of RW 04 Sidosari Residents, is manifested in the form of community participation in carrying out programs run by customers of Bank Sampah Sidosari Jaya. One of the programs is implementing the 3R concept in managing waste. Before the trash is taken by the officer, the waste in each household is sorted between inorganic and organic waste.

Invite people sorting out the trash is a job very difficult because it involves habits, culture, and low public indifference (Ruhmawati, 2017). The problem of waste in Sidomulyo Village before the existence of the waste bank is that there are still some residents who throw waste out of place, that is, one of them is disposing of household waste in a temporary rubbish bin in front of each other's fences, the community still mixes waste into one inorganic and organic. After the establishment of the Bank Sampah Sidosari Jaya, there was a positive change from the residents in the processing of household waste, ie the residents started not to throw waste in a mixed state, and the residents sorted out inorganic and organic waste. In the course of the progress of Bank Sampah Sidosari Jaya, some people have pros and cons. To minimize the pros and cons in the community there needs to be socialization to the citizens concerned. The goal is that the community knows and can participate in this activity. Not only the socialization is given to residents but also the provision of training on waste management. Citizens' representatives have been given training and outreach by the Sidomulyo sub-district, Semarang District, in the form of training to make handicrafts from inorganic waste.

The waste management activity at the Sidosari waste bank is considered successful because it is still running. The location and existence of this waste bank also greatly influence the running of management, because it is located in the middle of residents' housing. Analyzing this, it can be seen from the 3R waste management, namely location, use-value,

interaction, and a clean environment. One of the reasons for researching RW 04 Sidosari residential is because of the level of busyness that some civil servants have but can still take the time to successfully manage waste.

MATERIALS & METHODS

The research location was in RW 04 Sidomulyo Village, Ungaran Timur District, Semarang Regency. The location of the research site was at Jalan Ciliwung RW 04, Kelurahan Sidomulyo, Kecamatan Ungaran Timur. The population in this study is RW 04 households that were customers of Bank Sampah Sidosari Jaya. Samples taken were 13% of the population of 30 households, then obtained a sample of 20 households. The technique used to determine the number of samples was a disproportional stratified random sampling (Sugiyono, 2010: 121).

The sub-variables in this study based on their objectives were the background of people's perceptions of education, community care in RW 04 in waste management, the influence of educational levels on concern in waste management, the role of the existence of a waste bank, and its existence are assessed from social concepts. In measuring the level of formal education using a score of 1 to 4, namely graduating from elementary school 1, junior high school 2, senior high school 3, and university 4. Community concerns in waste management with respondents' choice of answers included yes and no along with the reasons, with a score of 0 and 1. The results of answers respondents were classified into 4 categories namely less, moderate, good, very good.

The data collection methods used in this study were observation, survey, and interview methods. The data analysis method was a cross table (bivariate) between awareness of waste management and education level.

RESULT AND DISCUSSION

Waste management in Semarang Regency consists of 19 Districts, new waste services can cover 16 Districts, including West Ungaran, East Ungaran, Bergas, Pringapus, Bawen, Bringin, Bandungan, Ambarawa, Sumowono, Banyubiru, Suruh, Pabelan, Tengaran, Getasan. Solid waste management is generally under the responsibility of the Sanitation and Parks Department. Community participation in managing waste is mostly done in the form of community service, transporting waste from its source that has been sorted into waste banks. 3R waste management by Bank Sampah Sidosari Jaya since 2013. Education in 3R waste management, at the beginning of Bank Sampah Sidosari Jaya, the community of Sidomulyo Village was given training and adopted knowledge about waste management. inorganic that is utilized and made a variety of craft skills. The number of people who participated was 22 people (53.6%). Bank Sampah Sidosari Jaya customers provide inorganic processing training. The training was filled by the owner of a waste bank business where a Bank Sampah Sidosari Jaya cadre works, from the work of investing in experience and receiving knowledge in managing inorganic waste, so that environmental residents get the benefits and impacts.

Table 1. Results of Variables of Community Concern in Waste Management

Interval	Category	Number of Communities	Percentage
1-3,75	Less	8	21,65
3,76-7,5	Is	11	24,95
7,6-11,25	High	12	29,27
11,26-15	Very high	9	24,19
Amount		40	100

Source: Research results, 2018

Based on the results of interviews with 40 respondents from Kelurahan Sidomulyo residents, it was found that there were less than 8 people (21.65%), 11 people (24.95%), then 12 people (29.27%), 10 people (24.19%). This determination refers to the variable of concern in waste management. The results of data processing

on the effect of education level on the concern of waste processing in RW 04. The role of the existence of a Bank Sampah Sidosari Jaya Kelurahan Kelomulyo in Semarang gives results that are included in the high category with the opinions of 40 people answering "yes" meaning that 40 residents acknowledge that after established a waste bank, in its activities to process waste directly, it can be felt from the education and behavior of the waste processing community and the benefits for the surrounding community. Residents are aware that with the establishment of a waste bank it can maintain cleanliness, beauty, reforestation of the results of organic waste processed into fertilizer, and the results of a variety of handicraft skills from processed inorganic waste.

The role of community behavior in waste management is very much needed by the community, it is an object and subject of waste management so that a participatory management model is developed. Participatory management is a management approach that is in accordance with the nature of 3R-based management which lays the foundation of waste management that grows out of the community, is carried out consciously and independently by the community, and the results are enjoyed by the whole community. Through these participatory development programs, it is hoped that all elements of society can jointly participate by contributing their thoughts and potentials to benefit the community.

Based on data on the source of waste generation in 2014, the source of waste generation was 697,270 m³, the volume of waste transported to the TPA was 121,940 m³ so that the percentage of waste services was 17.49%. The final facility for the waste management process in the form of a landfill, Semarang Regency has one Blondo landfill located in Bawen. The availability of the adequate number of human resources, including in terms of education, is not supported by the quality of expertise in solid waste. Difficulties in establishing

cooperation between waste banks, including between regions.

Regulations, the existence of regional regulations concerning cleanliness, and the structure of local government are not supported by firmness in implementing regulations such as granting sanctions and awards, which occur arbitrarily throwing waste in any place. Efforts to reduce waste have been carried out with a 3R pre-project and waste segregation but it has not been sustainable. The scope of waste services needs to be developed. Community participation is involved in waste management from the source of the waste but is not supported by a continuous behavioral process.

Based on the results of an analysis of waste management in Kelurahan Sidomulyo: the difficulty of collaborating between waste banks in managing 3R waste is a mutual benefit; limited solid waste campaign program as a means of awareness-raising behavior, active involvement of the community in waste management; lack of awareness of community behavior in handling waste that is good and right from its source in 3R-based waste management;

population growth and changes in fast-paced modern lifestyle. This causes the amount of waste generation to increase. Cooperation efforts are enhanced, including at the waste bank, and trying to improve the education of someone who is lacking or low, respondents' awareness of participation is very low, referring to respondents with a high level of education accompanied by a high awareness of behavior having an open mind, so it is easier to understand the problems that exist in around it, easy to convey information, easy to socialize waste management. The level of education can be used as an indicator if you are going to set up a 3R-based waste management unit if the citizens have a high level of educational background, and high behavioral awareness then the public will understand the importance of waste management and the existence of a waste bank.

The awareness of participation carried out by Bank Sampah Sidosari Jaya customers in managing waste based on the 3R concept (Reduce, Reuse, Recycle) based on high education and renewal of the new paradigm in social life.

Table 2. Results of Waste Management Analysis Based on Reduce, Reuse, Recycle

Customer / Infoman Name SJ = 30 (sidosari jaya)	July 2017 Weekly / 1 week Depositors reduce	August 2018 1 week Depositors reuse	Sept 2019 1 week Recycle depositor	Oct 2019 1 week Recycle, reuse, recycle depositors
SJ Customers	8	10	7	5

Source: Research, 2019

From these results also obtained the results of waste management that follows the management of waste through the role of awareness education community participation from month to month, year after year Bank Sampah Sidosari Jaya has increased. It is also proven that caring participation based on education can increase the behavior of community participation in sorting waste from its source, which has a positive impact on the environment (Figure 1).

The Community Waste Bank seeks to increase the carrying capacity and capacity of the environment to reduce the

use of plastic materials for the same or other needs and seeks to recycle to encourage the creation of skills and awareness of citizens in efforts to preserve the environment, increase the potential, intelligence, diversity of regional potentials and the environment.

One of the main programs emphasized by the government in environmental cleanliness is to improve waste management based on the 3R concept. Waste is managed through the Waste Bank which involves the direct participation of the PKK group in overcoming household waste from its source, and as an effort to reduce

environmental pollution, and provide benefits to the community and can change the behavior habits of the community in managing waste properly, to achieve

maximum results in managing household waste.

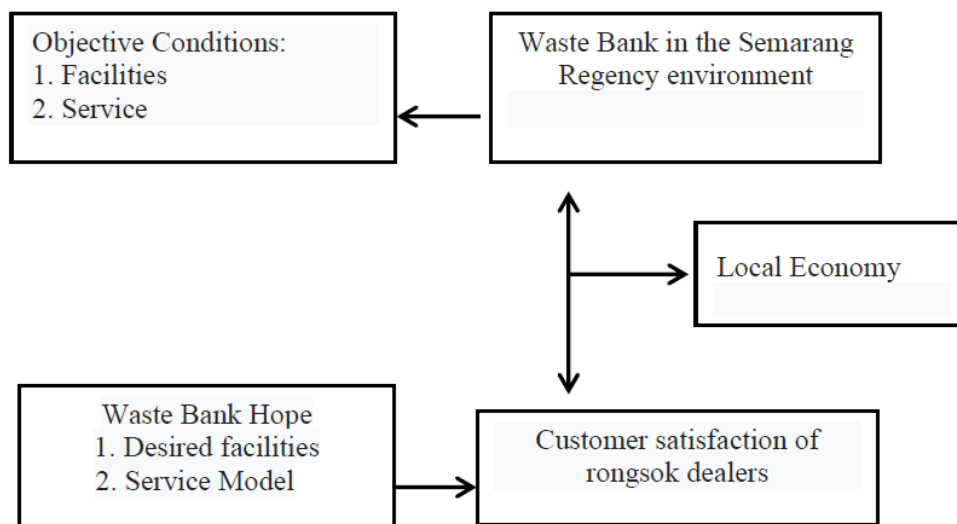


Figure 1. The Behavior of Community in Sorting Waste

Management of environmentally friendly supporting facilities, preserving environmental functions, preventing pollution, and preventing environmental damage. In addition to the recycling process of making plastic ores for the manufacture of new plastic products, it can also recycle plastics directly by processing them into handicraft items, such as used plastic parachute toys, flower pots, bags, etc. be creative to recycle plastic into other useful items.

Solid waste management systems in urban areas, including in the environment, need to get attention, because seeing from the large amount of waste generated from housewives, including housewives who live in residential densely populated housing complexes with no land as a place for processing waste, and the limitations of temporary landfills (TPS), to the extent of causing landfills in landfills.

Waste management which is managed by the managers includes a container, collection, transportation, processing, and final disposal. Requirements that must be met in waste management are

not to damage the beauty and neatness of the environment, do not pollute the air, water, and soil, do not cause odors, do not cause fires, and so forth. So it is clear that the importance of community empowerment in waste management based on the 3R concept (Reduce, Reuse, Recycle) because it sees the development of time along with population growth which has an impact on the amount of waste generation which is increasing while the existing land remains.

The community to dispose of trash into its place is still lacking or not accustomed. By looking at the table below, it doesn't hurt if we start from our own homes to reduce waste that cannot be used to the maximum extent possible. Human resources have more or less influenced the development of human civilization, which has become the agenda of the problems faced by the housing complex community, including rural and urban areas in Indonesia, where the city of Ungaran is also an important component that influences and complements human life in its environmental community, including the government in a stakeholder unit. The

problem of waste management will not be resolved properly, without the involvement of the community as the source of the waste

producer itself. Waste bank services in individual systems as described in the following Figure 2:

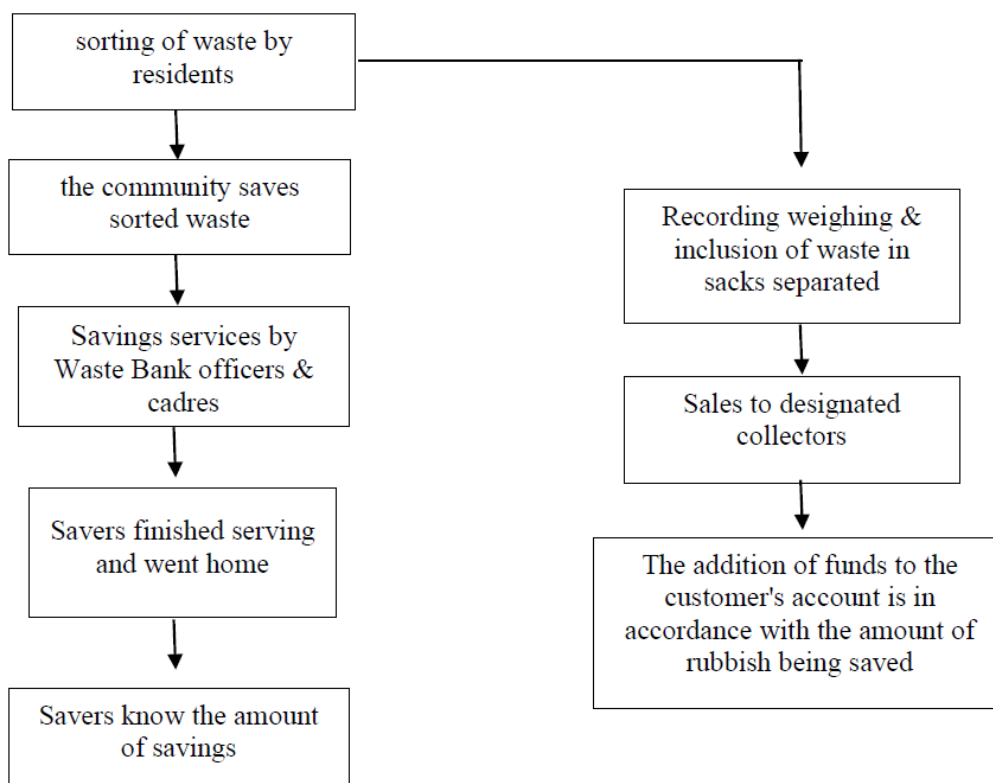


Figure 2. Waste bank services in individual systems

CONCLUSION

Facilities and services of Mugi Berkah, Sidosari Jaya, and Penyu Makmur waste banks Ungaran Regency, Semarang are still very limited so that they are still not in accordance with the expectations of the customers of the waste agent. The average types of facilities and services that are desired by customers of trash clubs include cleaning facilities, safe and comfortable parking lots, places, or containers where trash cans are filled with sorted waste trash.

There is cooperation between agencies, among others (Office of Environment, Office of Sanitation, Kelurahan, owner of waste bank business or waste manager, and waste collector dealer). Integrated waste management can be realized through a collaborative partnership between a waste bank and a waste dealer, with real action services and provision of

quality or professional facilities to the demand for waste dealers.

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