

**BANK WASTE AS MANAGEMENT OF HOUSEHOLD RUBBER BASED ON COMMUNITY****Aisyah Fadilah**

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**ABSTRACT**

The level of population, the increasing of welfare and lifestyle also community habits such as dumping waste into rivers build up the complex of waste problems, especially health impacts. Therefore, the need for waste management efforts involving community participation. The purpose of this study is to analyze the implementation of community-based waste management RW 05 Bungursari one with the Garbage Bank. Waste bank begins with the process of sorting organic and inorganic waste. Then the inorganic garbage that has been sorted is collected in the Bank Trash Unit to do the weighing and recording of the sale proceeds in the savings book system such as banking. The method used in this research surveys. Data collection is done by direct interview to the respondent, that is driving the activity of waste management at the location. Data analysis was done descriptively qualitative. The research was conducted in RW 05 Bungursari Kecamatan Cibeunying Kidul Kelurahan Pasir Layung Kota Bandung. Community-based waste management of RW 05 Bungursari Trash Bank is done by involving the participation of RW 05 Bungursari women. Community-based waste management such as Waste Bank can minimize garbage problems and can increase economic independence. Community-based waste management such as Waste Banks needs to be further socialized in order for more citizens to be involved in Waste Bank activities as well as the need for partnership support between Waste Bank management residents and related stakeholders.

**Key Words:** *Waste Management, Household Waste, Waste Bank, Public Role*

**INTRODUCTION**

The level of the population is increasing, the population of Bandung in 2016 amounted to 2.5 million with the volume of waste reached 1,500 tons per day. Besides the increasing of welfare and progress of person life accompanied by a consumptive lifestyle that is produce increasing amount of garbage daily, especially household or inorganic waste (dry waste). Increasingly, garbage accumulates and 60% of the waste comes from households (Dewi Nurkomalasari, 2014). In addition, people's habits such as throwing waste into the river build up the complex of waste problems. Surely we can not hang garbage settlement to PD Cleanliness Bandung City. For that the need for waste management efforts by making changes from the small things of each individual or society. Changes made then can be 'transmitted' into a habit in the family or society so that there is a big change (Heruman & Asteria, 2016). Attempts to change these small things can be done by raising awareness and changing the way people view the waste and how to treat or manage waste. People generally think that garbage is goods or

things that have been depleted value of benefits (Widiarti, 2012). The paradigm of the waste must be changed so that people have awareness and do something meaningful to manage their waste. Garbage is not a disaster but trash is a blessing. Changes in the paradigm of society about waste indirectly can anticipate the bad impact of household waste, especially the impact of cleanliness and health, if the waste is not managed properly will cause the environment is not healthy or otherwise (Hayana, 2015). Diseases caused by such diverse waste as basilaris Dysentrie, Dysentrie amoebic, Thypus, Ascariasis, DHF, and so on. The paradigm shift of waste can also increase the economic value for society. In addition to forming awareness and perspective on the community is expected to make concrete steps such as processing and utilizing waste. Community-based waste management can be done with the 3R concept (reduce, reuse, recycle) (Dewi Nurkomalasari, 2014), (Suyanto, Soetarto, Sumardjo, & Hardjomidjojo, 2019). Society is given education so that no longer throw garbage away without process it first. Communities should be educated to familiarize waste processing with the stages of sorting, selecting, and making waste economic value one of them through the development of waste banks.

Besides shaping awareness and changing people's perspective on waste, it is hoped that people can do concrete steps such as processing and utilizing waste. Community-based waste management with the concept of 3R (reduce, reuse, recycle) (Dewi Nurkomalasari, 2014), (Suyanto, Soetarto, Sumardjo, & Hardjomidjojo, 2019). The first step that can be done in encouraging people to take concrete steps is provided education so that people no longer throw garbage away without processing it first. Communities should be educated to familiarize waste processing with the stages of sorting, selecting, and making waste economic value one of them through the development of Bank Trash. Based on the background that has been described above, it is necessary to conduct a research on household waste management in RW 05 Bungursari which is the management of household-based household waste such as Waste Bank by involving the role of women in the region.

Garbage Bank is a collecting activity of inorganic waste (dry) phase begins by collecting inorganic waste (dry) which then sorted. Garbage Bank works to collect the garbage that has been sorted by the citizens or depositors as customers. Every customer gets a passbook, the system is like banking. Later, customers can save household waste to 'office' Bank Trash located in the vicinity of his residence. Party or Garbage Bank officer his duty to receive, weigh and appreciate the nominal waste, then record the price of waste deposited into the client's savings book. Saved saving will be weighed and rewarded with some money, they will be sold to collectors who have cooperated with the Bank's activities Trash. Appropriate approaches to the community context and the suitability of community needs are key to change (Heruman & Asteria, 2016) in addition to Waste Management through Waste Banks can improve the economic level of the community. Empowerment can be done by involving the participation of the community and maximize the participation of women. The promotion of women has demonstrated the ability of women to mobilize their communities to play an active role in managing waste in their environment and to exercise social control in their communities (Heruman & Asteria, 2016). Female citizens can mobilize individuals or communities to participate in environmental management activities and reduce the impact of garbage problems through Waste Banks.

Based on the background that has been described above, it is necessary to conduct research on household waste management in RW 05 Bungursari which is a community-based household waste management such as Waste Bank by involving the role of the female citizen in the area.

## METHOD

The method used in this research surveys. Data collection is done by direct interview to the respondent, that is driving the activity of waste management at the location. Data analysis was done descriptively qualitative. The research was conducted in RW 05 Bungursari Kecamatan Cibeunying Kidul Kelurahan Pasir Layung Kota Bandung. Site selection is due to the area close to the River and the population is very crowded. Residents who participated in Bank Trash activities as many as 25 customers. Delivery, garbage collection, and weighing were carried out by the Bank Trash Unit board consisting of housewives and mothers of local madrasah teachers. Implementation of Waste Bank unit RW 05 Bungursari on every Friday starting from 08.00-12.00 WIB.

## RESULTS AND DISCUSSION

### Results

RW 05 Area Bungursari District Cibeunying Kidul Kelurahan Pasir Layung Bandung City has a dense population. The distance between homes between the population is largely adjacent to a small road (alley) and a small part live in a residential complex. Given the physical features of such a region, it is certain that the production of waste generated by the population in this region is enormous. Most of the waste is produced from household waste. In general, waste generated in households includes organic, inorganic and B3 waste (Toxic and Hazardous Materials) (Widiarti, 2012). The waste components that are often produced in households are presented in table 1 below.

**Table 1.** Rubbish produced by household

Organic trash	Inorganic Waste	B3 waste
Leftovers	Newsprint	Battery
Leftover Pieces of Vegetables and Fruits	White HVS Paper	light bulb
Trash Sweep Pages	Chocolate Box	neon
	Paper Cartoon	Packing containers
	Colored paper pieces	floor cleaners etc.
	Platik Kresek	
	Plastic bottles	
	Metal	
	Glass bottle	
	etc	

Based on the above table of household waste is divided into 3 types of organic waste, inorganic waste, and B3 waste. Organic garbage is waste of food scraps, leftover pieces of vegetables and fruit or kitchen waste and garbage from the sweep of the yard. Inorganic waste has a variety of types of paper, plastic, iron, glass, and cloth. Of this type

each also has a variety of categories such as paper. Paper may include white, blurry, VHS paper, cardboard, cardboard, colored paper (eg brochures/ leaflets). So also with the plastic can be distinguished example of plastic crackle, plastic bottles with different types of plastic. Inorganic waste can be categorized as dry waste.

B3 waste is also waste from households. Examples of this B3 waste include batteries, light bulb/neon, container packaging cleaning the floor, the rest of the rat/insect poison, the remaining oil and so forth. B3 waste cannot be processed or managed by recycling actors because B3 waste is included in specific waste that according to Law no. 18 The year 2008 About Waste Management, specific waste is waste which due to nature, concentration, and/or volume require special management (Widiarti, 2012). This B3 waste is not allowed to be discharged directly into the environment but must be managed by the relevant authorities such as the relevant agencies or business actors of B3 waste processing. Authorities to manage B3 waste are those who know how to process B3 waste. Therefore, the perpetrators of household waste management are only required to store B3 waste for a maximum of 90 days. The various wastes can cause problems such as environmental pollution if disposed of into a river or to a temporary disposal site (TPS).

### **Discussion**

Based on the above then the need for waste management, especially household waste by choosing the garbage first. The sorting done by the household must be supported with adequate waste bin facilities. Ideally in every house there are 2 trash cans provided by the garbage can for organic trash (wet) and garbage bin for inorganic waste (dry), so that garbage mobilization activity can be done well. Currently most of the community RW 05 Bungursari, Bandung, Indonesia, has done the garbage management in the household with the selection of garbage first, organic waste (dry) separated with organic waste (wet) but not yet using a special waste bin, the community still separates organic waste (wet) and inorganic waste (dry) into large plastic bags or sacks.

After the separation of organic waste (wet) and inorganic waste (dry), most of RW 05 Bungursari residents then do the management of inorganic waste. Inorganic waste is household waste generally divided into plastics, paper, glass, metal, and cloth. Each of these trashes has a sale value because the waste is still used as a recycling material. The management of household inorganic waste in RW 05 Bungursari is done with Waste Bank program. Waste Bank is a concept of waste management that is currently a trend in Indonesia. The concept of Waste Bank comes as one solution to solve the garbage problem. Waste management is commonly done by relying on the process of transporting and transporting waste to landfills. Over time old patterns become ineffective, as the volume of waste increases due to the daily activities of the increasingly diverse citizens and increasingly narrow landfills. This is because the garbage has not been sorted, just mixed and thrown away. The Garbage Bank teaches people to sort out the garbage and the residents who hand over the garbage will earn extra income for the economic independence of the citizens (Heruman & Asteria, 2016).

Management Bank Sampah in RW 05 Bungursari originated from socialization and counseling conducted by the Village and Non-Governmental Organizations (LSM) Green Lestari. In 2016 RW 05 Bungursari Trash Bank was formed with a total of 10 people

involved involving the participation of women, consisting of housewives and madrasah mothers in the area. Customers who participated in Waste Bank activities amounted to 25 people from RT 01-RT 09. Garbage Bank in RW 05 Bungursari is a Garbage Bank unit, while the Parent Bank of the garbage itself is a Non-Governmental Organization (LSM) Green Lestari. Green LSM Lestari is a Community Social Institution that is engaged in training and coaching which one of them is about Garbage Bank. Non-Governmental Organizations (LSM) Green Sustainable is ready to guide the waste management in the environment so that people get the economic benefits from the waste and the environment becomes clean, healthy, cool with the spirit of gotong-royong. Garbage Bank pioneered since early 2013, Green Trash Bank Lestari is located on Jln. Cisituh Indah Baru No. 6 Kelurahan Dago Kecamatan Coblong Bandung 40135. The vision of Non-Governmental Organization (LSM) Green Lestari is an independent organization which becomes a reference in integrated, fair and sustainable environmental management based on community participation.

Bank Trash begins with the process of sorting organic and inorganic waste. Then organic waste is collected according to the type. Trash managed by Waste Bank is inorganic waste is household waste generally divided into plastic, paper, glass, metal, and cloth. Then the inorganic garbage that has been sorted is collected in the Bank Trash Unit to do the weighing and recording the proceeds of sale in the book of savings.

Bank Trash Unit RW 05 Bungursari has 25 customers, customers sort out organic and inorganic waste in their homes. The process of sorting, collecting, weighing, recording Bank Waste by the board is done every once a month on Friday morning at 08.00-12.00 WIB, the customers bring inorganic waste to the RW 05 Bungursari Trash Bank unit located at the RW 05 Bungursari to do the weighing and recording of proceeds from the sale in the savings book by the management of Bank Trash Unit RW 05 Bungursari. The garbage collected by customers is weighed based on the type of organic waste as presented in table 2.

**Table 2.** The result of Weighing of Garbage Bank

No	Type of Garbage	Per bl/per kg
1	files	1,13
2	Dus / Box	10,16
3	Duplek	9,16
4	Tea cups	2,64
5	At ease	6,79
6	Pet A	5,33
7	Aro	0,35
8	PE	6,34
9	BB	15,44
10	Emberan	26,60

Based on table 2 above after weighing the type of garbage collected most people or RW 05 Bungursari is a type of garbage. Garbage bins are inorganic garbage such as glass tea, colored plastic glass, plastic bottle of soy sauce/sauce. Garbage bins are garbage mixed

without being sorted according to the type. The weighed waste is then sold at a price determined according to the type of waste weighed. The price determined by Bank Sampah is presented in table 3 below.

**Table 3.** List Price of Bank Trash RW 05 Bungursari

No	TYPES OF GOODS	PRICE	
		CITIZENS	UNIT
1	files	Rp. 1,000	Rp.1,700
2	Color Archive	Rp.300	Rp.500
3	Dus/Box	Rp.1,000	Rp.1,700
4	CD / paper blurred	Rp.800	Rp.1,000
5	CPU (computer, ...)	Rp.10,000	Rp.15,000
6	Cup A / plastic cup (clean, free from other colors / labels)	Rp.4.500	
7	Cup B / plastic cup (dirty, still labeled)	Rp.2,000	Rp.2,700
8	Datu (rubber sandals)		
9	Duplex / thin box (tea bag, calendar)	Rp.300	Rp.500
10	EH / black bucket	Rp.800	Rp.1,000
11	Emberan (glass tea, color plastic cup, plastic ketchup bottle / sauce)	Rp.1,500	Rp.2,000
12	Gallon of drinking water	Rp.2,000	Rp.3,000
13	Cans (cigarette cans, ...)	Rp.200	Rp.300
14	Sacks of cement	Rp.1,000	Rp.1,700
15	Large frills (helmets, dispensers, magicom, iron)	Rp.200	Rp.400
16	Little frills (hangers, floppy disks, tapes)	Rp.1,500	Rp.1,800
17	Newspaper	Rp.1,000	Rp.1,700
18	LD / cap the gallon	Rp.2,000	Rp.3,000
19	Toys (plastic bottle cap, used shampoo / liquid soap, toothbrush, pen)	Rp.1,700	Rp.2,200
20	Magazine	Rp.600	Rp.800
21	Mizone / plastic color bottles	Rp.800	Rp.1,000
22	Nilek		
23	PE / clear clear plastic (used sugar, ...)	Rp.800	Rp.1,000
24	Pet A / plastic bottle without label	Rp.2,000	Rp.2,500
25	Pet B / plastic bottles are still labeled	Rp.1.500	Rp.2.000
26	Zinc	Rp.200	Rp.300
27	Stainless Steel	Rp.800	Rp.300

Based on table 3 above shows the price difference in accordance with the types of garbage. The price of garbage to the residents is different from the price of garbage to the RW 05 Bungursari Trash Unit. The garbage that has been weighed by the proceeds is written in the savings book owned by the Customer. Distribution of savings results Customers of Bank Rakyat Unit RW Bungursari are conducted once a year. The Garbage Bank Unit also has profits and is distributed once a year to all management, so that the Bank of Garbage management has additional income. The activity of collection, weighing and recording of garbage sale result done by female citizen every month, Bank Trash Unit management once a year following the meeting conducted by Induk Bank of Non-Governmental Organization (LSM) Green Lestari. The meeting was in the form of guidance or socialization of the latest Garbage Bank program. The latest programs are smart cards, smart cards that can be used for shopping at grocery stores/supermarkets owned by Hijau Lestari Non-Governmental Private Lading Bank (LSM). Utilization of waste as an economic source is expected to be an added value in the development of sustainable quality of life, because the independence of the community will have an impact on the sustainability of economic development in the middle of the community itself (J.S. Ardiwinata and D. Mulyono, 2018).

## CONCLUSION

Community-based waste management in RW 05 Bungursari uses 3R concept (Reduce, Reuse, Recycle). Household waste management in RW 05 Bungursari is conducted through activities involving community participation involving women such as housewives and madrasah mothers. The waste management that involves community participation is the Waste Bank program. Waste Management Garbage Bank begins with the process of sorting the organic and inorganic waste made by the residents in their respective homes, then the sorted inorganic garbage collected according to its kind. Garbage managed by Bank Trash is inorganic waste that is household waste which is generally divided into plastic, paper, glass, metal, and cloth. After that, the inorganic garbage that has been sorted is collected in the Bank Trash Unit to do the weighing and recording of the sale proceeds in the savings book system such as banking. The waste bank is one of the solutions to be implemented to address the garbage problems faced during this time, especially hygiene and health issues.

The presence of garbage banks has also encouraged capacity building for RW 05 Bungursari residents by seeking the independence and self-reliance of citizens through the formation of awareness, knowledge, and capabilities that encourage citizen participation. Raw Bank RW 05 Bungursari also stimulates women to contribute to managing the environment. Should increase community participation in waste management one of them by re-socializing about waste management so that residents who follow garbage Bank increase. Because waste management through Waste Bank can minimize garbage problems such as hygiene and health problems. Training and fostering of good waste management by dividing phase, choosing first need to be done back to the customer so that customer can sort and collect garbage according to its type no longer counted bucket because of the value of garbage price lower.

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Waste Management through Waste Bank is innovation in facing garbage problem especially in RW 05 Bungursari and has benefit to increase economic self-sufficiency of society hence need to be increased again participate in the form of provision of facilities such as adequate garbage bin and also support the partnership between garbage bank managers with related stakeholder.

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