ABSTRACT

In 2015, Magelang Regency was entering the category of ‘emergency waste’ which the volume of waste is 453 tons per day. After the news out, Magelang Regional Govenrment held a Waste Bank Program in order to decreasing the volume of waste. Eventough the program has been implemented 3 years since 2015 until now there are still some problems that caused by waste. The problem to be studied in this research is how the evaluation of Waste Bank Program in Magelang Regency in 2017-2018?

Data collection of respondents is done by interview method and then the data is analyzed by using descriptive analysis. Meanwhile, the evaluation of waste bank program was formulated using the Criteria for Evaluation such as, effectiveness, efficiency, adequacy, alignment, responsiveness, and accuracy.

From all of the criteria for evaluation, there are two criteria that not optimal yet because there are still some obstacles that occur in implementation. Based on the results of the research, with the activity of waste bank program in Magelang Regency is successfully implemented based on the objectives targeted by the Environmental Office of Magelang regency.

Keyword: Magelang Regency, Waste Bank, Evaluation

CHAPTER I

INTRODUCTION

1.1 Background

The population growth in Indonesia is very rapid. The rate of population growth still reaches 1,49 percent or about four million per year which brings Indonesia in fourth with the largest population in the world (bkkbn.go.id, 2016). Problems caused by population growth even more, one of the problems that has been closely related to Indonesia is waste. The problems of waste such as, household waste, industrial waste, commercial and public facility waste every year are getting worse. In addition to population growth, industrial development, urbanization and modernization lead to an increase in demand for food and other secondary needs that result in the increase of waste generated every day. Waste is potentially very damaging to the environment and human health. Based on statistical data, total volume of waste produced in Indonesia reaches 187,2 tons per year (pikiran-rakyat.com, 2017). The amount of waste transported per year gives an idea of the readiness of each region in handling the waste produced.

Magelang is one of the regencies facing this waste problem. The number of potential nature and heritage tourism located in Magelang regency, such as Borobudur temple, Ketep Pass and other attract local and foreign tourists to visit these places. It creates positive impacts to the local economy and people around the sights but this also can make negative impact to the surrounding environment namely waste multiply. Based on data from Central Bureau of Statistics Magelang

Regency in 2012-2015, the total population spread in 21 sub districts in 2015 has reached 1 million people.

Table 1.1 Total Population of Magelang Regency Year 2012-2015

Year	Household	Population
2015	347.127	1.245.496
2014	341.780	1.233.695
2013	336.432	1.221.681
2012	331.085	1.219.371

(Source: Central Bureau of Statistics Magelang Regency, 2015)

The data from Central Bureau of Statistics shows that every year the population of Magelang Regency has been increasing. In 2013 the total population of Magelang regency reaches 1.221.681 people, an increase of 12.014 people from the total population in 2014 which is 1.233.695 inhabitants. Despite the decreasing number of population growth in 2014-2015 by 11.801 people from the total 1.245.496 people, yet the total population in 2015 increase.

Population growth that is incompatible with environmental sustainability can lead to socio-economic problems. This is because of the various needs of human life. In addition, population growth will increase the volume of waste generated each day.

In general, the handling process of waste are sorting, collecting, transporting, and processing waste. Meanwhile, reduce, reuse, and recycling are great ways to reduce waste. Waste management has been regulated by the government in Act Number 18 Year 2008 on Waste Management. The law states

that not only governments and local governments are obliged to manage waste but also communities, especially business actors and waste producers, has a responsibility to create a clean and healthy environment by reducing and managing waste. However, local governments have the authority to establish waste management policies and strategies in accordance with national and provincial policies as mentioned in Article 9 of Act Number 18 of 2008 on Waste Management.

The government has implemented several strategies to overcome the waste problem, one of which namely Waste Bank. Waste bank is generally formed in neighborhoods with 1.000 inhabitants and is usually run by underprivileged citizens who want to increase their income. The customer brings all his non-organic waste to the bank that is treated like a savings account. Transactions are recorded in a savings book given to a customer or alternatively recorded in a book kept by a bank. Many banks also accept organic waste, meanwhile others encourage household composting. A waste bank sells goods that are saved to collectors for reuse or recycling. Saved waste is converted into withdrawn cash if necessary after a 15% cut to finance the bank's operations.

Waste bank system was introduced firstly in 2006 in Thailand as a breakthrough in ‘saving waste’. Meanwhile, the first waste bank in Indonesia was established in 2008 in Badegan Village, Bantul Regency, Special Region of Yogyakarta. In February 2012, there were recorded 471 banks, and at the end of June 2012, it increased up to 728 waste banks with a turnover of 31,2 million rupiahs per month. According to the Ministry of Environment, in June 2013

Indonesia had 1.195 waste banks in 58 districts and cities with 106.000 workers. Many companies make waste banks as part of their social corporate responsibility. In 2014, the Ministry of Environment set a target to develop waste banks in 250 cities across Indonesia with 25 waste banks in each city there will be 6.250 waste banks in total (Ministry of Environment, 2013).

In Magelang Regency, the waste bank has been established since 2015. The reason behind the creation of this waste bank is due to the fact that in 2015, the United Nations (UN) states that Magelang Regency tell into the category of 'emergency waste'. The volume of waste is 453 tons per day and still increasing every year in which 70 percent of the total waste in the Regional Landfill comes from household activities (nationalgeographic.grid.id, 2016). The amount of waste that collected becomes a challenge for Magelang Regency in order to manage the waste properly. Good waste management will create a positive impact on the environment.

Waste Bank program that planned by Magelang regional government regarding waste, is processing household waste management into organic fertilizer, counseling, as well as waste management or recycling training. This program not only can solve the waste problem in each region, but also can improve the quality of society and also the income of the community. In addition, the community in this case also be able to participate to reduce or overcome the problem of waste.

Approximately 3 years after this program has been implemented, the publication of the implementation of Waste Bank in Magelang Regency is aggressively carried out by the Regency Government in an effort to socialize this Waste Bank program to the wider community. Based on last news published by Wawasan News online version in February 2018 in the order to celebrate the 34th year of Mungkid, the Magelang Regional Government held a Waste Bank Competition Level Magelang Regency. 21 groups of Waste Bank spread over 21 districts in Magelang Regency joined this competition (wawasan.co, 2018).

In Magelang Regency, there are two Waste Bank locations which are used as references for Waste Banks in other sub-districts. Lestari Waste Bank, Dusun Cecelan, Soroyudan Village, Tegalrejo sub-district is a good example of self-managed waste management by society as evidenced by their many innovations in organic waste management. There are 4 innovations made including recycling child diaper waste, transforming a village land that was used to dispose of waste into a secretariat for independent waste management activities, making miniature biogas, banana weevils that can be used for organic fertilizer and liquid fertilizer organic (beritamagelang.id, 2018).

Another waste bank which becomes a good reference is Sekar Gendis Waste Bank. This waste bank has also produced a lot of innovation in the form of the use of waste bank applications which are, establishing waste bank distributions, paying Land and Building Taxes (PBB) from waste, buying credit using waste and recycling online shop product (Environmental Office of Magelang Regency, 2018).

Although the regional government held a large-scale socialization by holding a competition as previously explained, in 2018 there was no significant reduction in the volume of waste. The National Waste Management Information System (SIPSN) still shows the total volume of Magelang Regency waste of 575,40 tons/day, where the amount of unmanaged waste are 510.40 tons/day during the 2017-2018 period (sipsn.menlhk.go.id, 2018). This shows that from 2015 to 2018 the volume of waste has not been reduced even though in the vulnerable time the waste bank program has been implemented. However, the data has not shown a decrease in the amount of waste volume and the volume of waste that is not accommodated in the regional Magelang landfill is still in massive number.

Another problem is because in several sub-districts in Magelang Regency, still have lacks awareness of the importance of environmental cleanliness. Most of the people still burn waste around the home environment even though the smoke, especially plastic waste smoke, is one of the triggers of cancer, this happens for example in Bringin Village, Srumbung District, Magelang District. Even though there is a waste bank in the village, the residents prefer to burn waste instead of depositing the waste into the waste bank (rumahzakat.org, 2018).

Serious waste problem also occurs in some areas of Borobudur, in which the volume of waste is increasing. Landfill is provided in the irrigation section or ditch area of PT. Taman Wisata Candi Borobudur, yet the general public make it as an opportunity to dispose waste which has exacerbated the view (krjogja.com, 2018).

Another problem that still often occurs in some villages is the habit of people throwing waste into the river, which is located close to residential areas, causing the river to almost overflow during the rainy season, as happened in Bligo Village (republika.co.id, 2017). It shows that the waste has not been properly accommodated in the waste bank, this also raises the question of the effectiveness of waste banks in Magelang Regency.

1.2 Research Question

Based on the background above, the explanation concerning the condition in Magelang Regency and problems related to Waste Bank, then the research question in the study is how the evaluation of Waste Bank Program in Magelang Regency?

1.3 Research Objectives

According to the formulation of the problems that have been stated before, the objectives of this research are as follows:

1. To know the evaluation of Waste Bank Program in Magelang regency.

2. To know the impact of the evaluation of Waste Bank Program in Magelang regency.

1.4 Benefits of Research

This research is expected to contribute both theoretically and practically, as describe below:

1. Theoretical benefits

This research can be used as a basis material information and input for researchers of research that has the same relevant objects, especially in the public policy evaluation in Governmental Science study.

2. Practical benefits

a. For the researchers, this research is as a proof of existing theories and their implementation.

b. For the Local Government, this research is expected to help the Government as a reference material to evaluate the performance the policy.

c. For the society, this research is expected to help surrounding community in developing the program and increase people income.

1.5 Literature Review

The literature review, it will show previous studies that have similarities with the research topic to be conducted. This literature review will be briefly explained in the detail information from previous research as a basis for comparison. The following are some of the previous studies which can be seen in table 1.2:

Table 1.2

No.	Name	Research Tittle	Research Method	Research Result
1.	Dyah Retno Wijayanti, Sri Suryani (2015)	Waste bank as community-based environmental governance: a lesson learned from Surabaya	Descriptive-analytics	This paper discusses an implementation of waste bank as community-based environmental governance. Waste bank as a business is owned by people who consider waste as a valuable economic commodity and savings, has instruments that involving community in waste management. In Surabaya, waste bank grows rapidly and has supported community's livelihood and encourage people's self-reliance in environmental management.
2.	Wichitra Singhinnusorn, Kidanun Donlakorn, Warapon Kaehanin (2017)	Household recycling behaviours and attitudes toward waste bank project: Mahasarakham municipality	Comparative study	This study investigated factors influencing household recycling behaviour and the possibility of household participation in a community-based recycling bank project. The research examines two communities in Mahasarakham municipality, where there are

				differences in conditions and waste recycling management. The study demonstrated that demographic attributes and socio-economic factors play a little role in waste separation and recycling behaviour at household level.
3.	Hasfarm D. Purba, Christia Meidiana, and Dimas W. Adrianto (2014)	Waste management scenario through community based waste bank: A case study of Kepanjen district, Malang regency, Indonesia	Qualitative approaches through deep interview with relate stakeholders	The population growth in Kepanjen District leads to the waste volume increase. Due to the fact that the landfill in this area is approaching its maximum capacity, the local government needs to find out other alternatives to treat the waste. This article proposes one sort of solutions to prolong the landfill's age through waste minimization involving community participation. Therefore, waste reduction through waste bank has been initiated in Kepanjen District.
4.	Nur Indrianti (2016)	Community-based solid waste bank model for sustainable education	Qualitative approaches	This paper deals with community-based solid waste bank development at the Quran education park (*Taman Pendidikan Al-Qura*n, TPA) named Miftahul Jannah located in the Sonosari settlements, Tegaltirto village, Berbah subdistrict, Sleman regency, Yogyakarta Special Region, Indonesia. The result of the study shows that MJ-SWB can achieve economic, social, and environmental objectives. This proves that MJ-SWB is able to financially support the learning process of TPA Mifhathul Jannah in a sustainable manner.
5.	Jitti	Promoting a community-	Qualitative	Yala is a city of some 80,000 people in southern

	Mongkolchaiarunya (2005)	based solid-waste management initiative in local government: Yala municipality, Thailand	approaches	Thailand, and is well known for tidiness and clean conditions. However, it has experienced problems in waste disposal and has sought ways of addressing these through alternative techniques, including recycling. A package of new practices was introduced, one of which ("Garbage for Eggs") is described here. The project succeeded initially in promoting clearance of a backlog of discarded items, especially glass, thus improving the environment of the communities; but the quantities brought for exchange then reduced steadily over a year of monitoring, to much lower levels.
6.	Yeny Dhokhikah, Yulinah Trihadiningrum, Sony Sunaryo (2015)	Community participation in house hold solid waste reduction in Surabaya, Indonesia	Quantitative approach through distributed questionnaires	The goal of this study was to examine the community participation in household solid waste (HSW) reduction and the influencing factors in eastern Surabaya. The research was conducted in three districts, namely Sukolilo, Rungkut, and Tenggilis Mejoyo. Results of this study showed that average HSW generation rate in eastern Surabaya was 0.33 kg/capita/day. The HSW composition was dominated by food waste (64.19%), followed by plastics (10.79%), paper (9.24%) and used diapers (6.97%). The socio-economic characteristics had less influence than the supporting factors on sorting, recycling and composting activities.

7.	Slamet Raharjo, Toru Matsumoto, Taufiq Ihsan, Indriyani Rachman, Luciana Gustin (2017)	Community-based solid waste bank program for municipal solid waste management improvement in Indonesia: a case study of Padang City	Qualitative approaches using SWOT analysis	Indonesia has a regulation *UU No. 18/2008* which changes the paradigm from waste dumping to recycling. The purpose of this study is to understand the achievement and obstacles of community-based waste recycling through the solid waste bank (SW bank) program and its potency to improve the local MSW management in Indonesia. This development scenario may result in the increase of recycling amount of SW bank activity to 6 % of the total MSW generation in 2028.

Based on the several studies carried out above which are being references in this study, some have the same aspects as the research that will be conducted. However, in practice it has a considerable difference from the studies above. Previous studies focuse on community empowerment, meanwhile this research focuses more on evaluating government policies.

1.6 Theoretical Framework

Theoretical framework is a literature review related to theory that is discussed in the research. In conducting a research, it requires theory as basis of research before collecting data. To support this study, the writer used several theories that are related to the subject. The following study theories that will be discussed in this research are:

1.6.1 Policy Evaluation

1.6.1.1 Definition of Policy Evaluation

Evaluations are usually aimed at assessing the extent to which the effectiveness of public policy is accountable to its constituents. The extent to which goals are achieved and to see how far the gap between expectations and reality is. According to Anderson in Winarno (2008: 166), in general evaluation of the policy can be said as an activity related to estimation or assessment of the policy that includes the substance, implementation and impact of implementation of the policy.

According to Lester and Stewart (Winarno, 2008: 166) policy evaluation can be differentiated into two different tasks, the first task is to determine the consequences of a policy by describing its impact. Meanwhile the second task is to assess the success or failure of a policy based on predefined standards or criteria. Evaluation of the policy is a matter of fact in the form of