

ANALYSIS OF THE ECONOMIC VALUE OF WASTE IN COMMUNITY-BASED WASTE MANAGEMENT

by Rachmad Santoso

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ANALYSIS OF THE ECONOMIC VALUE OF WASTE IN COMMUNITY-BASED WASTE MANAGEMENT

Munawar
UPN "Veteran" East Java

Abstract

Samaph problems in Indonesia are increasingly real and complex in various regions. Larangan Village RW 09, Candi District, Sidoarjo Regency is one of the villages that utilizes waste to become economically valuable and makes achievements in the environmental sector so that it brings blessings of economic value for the welfare of the residents of RW 09 Larangan village. The purpose of this service agenda is 1) Waste management with economic value can add value to income. 2) Achievements in the environmental sector which have an impact on increasing economic value. The method used is the question and answer method, discussion and evaluation of activities. The results of this dedication are 1) Waste management shows positive results, namely 65.33% that residents admit that behind Residents' waste can get economic benefits, namely increasing household income and residents' cash. 2) Achievements in the environmental sector also have an economic impact that can increase the cash income of residents and various contributions from donors which add to the beauty of the environment in RW 09, this is indicated by the results of the questionnaire, namely as many as 91.34% support activities for environmental management, especially related to rubbish.

Keywords : Economic Value, Revenue Value, Garbage Bank

INTRODUCTION

Garbage is a form of pollution that is just as harmful to the environment. In various regions of Indonesia, the issue of waste is becoming increasingly real and intricate. The Ministry of Environment and Forestry (KLHK) conducted a survey to monitor marine debris from 2017 to 2018 in 18 regions and cities, and the findings revealed that the average amount of marine waste produced was 106.38 grams per square meter. In addition, based on the assumption that the average amount of waste produced per person in 2016 was 0.7 kilograms, the Ministry of Environment and Forestry stated that the national waste generation is 175,000 tons per day, or 64 million tons per year. According to the Ministry of Environment and Forestry, all levels of stakeholders must be involved in waste management. Siti Nurbaya Bakar, the Minister of Environment and Forestry (LHK), stated, "The challenges of waste management with an expanding population and changes in people's consumption patterns will result in an increase in the volume and type of waste, as well as the increasingly diverse characteristics of waste." In a recent official statement, Siti Nurbaya stated, "This challenge must be faced with systematic steps and collaborative work in the spirit of mutual cooperation." 70% trash. The waste management paradigm places an emphasis on upstream policies with the 3R mindset—reduce, reuse, and recycle—because the rate of waste reduction is 30%. He said that the idea of using waste as an energy source is a new way of thinking that says waste is not a waste that has no value. This idea can increase the economic value of waste by converting it into energy that can be used by the community as a whole.. (Salengke, 2019).

Communities that are concerned about waste are expanding in a number of cities and are able to use waste in accordance with the 3Rs (reduce, reuse, and recycle) to reap the benefits of a circular economy. The way people think about waste has also changed,

according to Dae and Pakaya (2019), as it is no longer what is collected, transported, and then disposed of. Now that waste has value economically, it can drive the economy of the community. Based on Presidential Regulation Number 97 of 2017 concerning National Policy and Strategy (Jastranas) for Domestic Waste Management Ladder, Siti Nurbaya stated that districts and cities must implement real planning and action to reduce and handle regional waste. As per him, there should be a decrease in waste and great waste dealing with in its administration in regimes and urban communities in a quantifiable way. Through regional policies and strategies, livable city planning and real action to reduce and manage waste are realized. Liveable cities are realized in this manner. According to Lestari and Riyanto (2018), in order to pique the public's interest in sorting and storing waste in waste banks, local governments—the leaders of waste management as mandated by Law Number 18 of 2008—must innovate. actively participating in measures for waste management," Siti Nurbaya said at the end of June's Intergovernmental Meeting Coordinating Body on the Seas of East Asia (Cobsea) in Bali. At that time, Minister Siti thanked the Cobsea attendees and demonstrated the innovative online Waste Bank Environmental Awareness and Concern Information System (Sidarling) of the City Government of Denpasar, Bali. Siti asserts that Sidarling has the potential to be developed into a national tool for managing waste. This kind of innovation is in line with President Jokowi's attitude toward dealing with marine waste at the ASEAN Summit in Bangkok. "Additionally, Siti stated that the Ministry of Environment and Forestry will immediately examine it in order to consider and encourage such a system to continue expanding and becoming a national standard. At the moment, it is thought that the waste recycling industry absorbs little. In fact, recycling is the foundation for turning plastic waste into goods that can be sold for money (circular economy), which reduces the amount of waste plastic produces..

Many people around us still burn plastic waste along with other types of waste. But actually this is not safe for health and the environment because it produces toxic white smoke . That's why you should know how to manage household waste. In fact, there are still many who are confused about tips for managing waste at home so it doesn't have an adverse impact on health and the environment (Mujiono, 2018). The goal of proper waste management is to make waste have economic value or turn it into materials that don't harm the environment. By managing correct household waste, we can help to reduce the negative impact of waste on the environment . (CNN Indonesia, 2019).

Proper household waste management can help reduce the negative impact of waste on the environment. Summarized from various sources, here are some steps for managing waste that can bring benefits. (CNN Indonesia, 2019): 1) **Segregate Waste According to Type.** Broadly speaking, waste can be divided into two types, namely organic and inorganic waste. Prepare two different trash cans at home that are specifically for each type of waste. Organic waste is waste that comes from nature, such as food scraps or leaves. In other words , all waste that can be decomposed easily is organic waste. While plastic, rubber, glass and cans fall into the category of inorganic waste. Inorganic waste should be disposed of in a place that has a plastic smelter or recycling equipment. 2) **Create Organic Waste So Fertilizer,** The easiest way to manage organic household waste is to make it into compost that can be used for gardening. But if you don't like gardening or don't like the smell that is emitted during composting, you can donate organic waste to friends who have a hobby of gardening or plant sellers. In this

way you can still manage organic waste well. 3) **Inorganic Waste Recycling** Some inorganic waste can be recycled, such as paper, cardboard, glass bottles, plastic bottles, or cans. You can check the recycling logo on the food or drink packaging that you have purchased. If there is a recycling logo, then the food packaging can be recycled. Take the inorganic waste to the nearest waste recycling center or you can also give it to scavengers. 4) **Electronic Waste Recycling**, Separate hazardous waste to be taken to a recycling center. Recycling center staff must know how to recycle hazardous waste so as not to damage the environment. For electronic goods that have been damaged or become trash, you can return them to the company that produced them. Some electronics companies accept used electronic goods for them to recycle into new electronic products. You can also throw electronic waste in the electronic waste bin or e-waste. -waste that has been provided by the local government. 5) **Reduce , Reuse and Recycle, Cultivate** a reduce, reuse and recycle lifestyle or commonly known as 3R. Make it a habit to reduce the use of plastic or other materials that are difficult to decompose. Then don't forget to use used items so they can be reused. Such as using used plastic bottles to make plant pots. In addition, there are many other used items that can be reused with creative ideas You. Finally, don't forget to do how to manage household waste and recycle inorganic waste so that it continues to bring benefits to the environment.

Waste management that has economic value can help increase family income if it is managed properly. This service program was carried out in Larangan Village, Candi District, in RW 09 Sidoarjo to be precise. The waste bank program run by this village has received scrutiny from the local government because this program brings the community to become more aware of the environment. The waste sorting held by each RT every month is a reflection that the waste bank program is running well. The Garbage Bank Program has made Larangan Village a model for other villages throughout East Java. Visits from various agencies and community groups who wanted to know about the programs implemented through this waste bank. Larangan Village also received appreciation from the local government regarding the agenda of this activity, one of which was getting donations of composter and plant seeds used for tampula pots such as potting media , papaya seeds and longan seeds. It is hoped that the existence of this composter can also help soil fertility or the potting media used for toga planting. This organic waste management is very beneficial for residents because it can reduce the impact of household waste pollution by processing organic waste properly. As with the community service carried out by Suprpto et al (2017) using the OSAMA technology approach to process household organic waste into useful liquid fertilizer for plants. This is also done by Pujiono, et al (2019) with its D-Trash technology which also processes organic waste into liquid fertilizer that is beneficial to the surrounding community.

Based on the above activities, the formulation of the problems that can be taken are : 1) How to reach the economic value behind the waste to add value to income? 2) How can waste create achievements in the environmental field ? The objectives of this service are: 1) Waste management with economic value can add value to income. 2) Achievements in the environmental sector that have an impact on increasing economic value.

METHOD

Time and Place of Service

Time: Community service activities will be held on 16-18 October 2020.

The place of service is located in Larangan Village RW 09, Candi District, Sidoarjo Regency

The method used in this service program is:

1. Question and answer method, which is used to respond to the extent to which the level of understanding and knowledge of accounting about recycling waste processing has economic value.
2. Discussion method, in which speakers and participants hold dialogues that discuss issues surrounding the management and separation of both organic and inorganic waste which is useful for increasing family income.
3. Evaluation of activities, carried out by giving a questionnaire. The questionnaire contains material on how to reverse it so that we can add value to our income and achieve environmental achievements. If the score is good then the implementation of counseling can be said to be successful.

RESULTS, DISCUSSION AND IMPACT

Communities at the smallest scope, namely villages, carry out activities to reduce the volume of plastic waste and household waste in the Village or Sub-District of Larangan RW 09, Candi District, Sidoarjo City, East Java Province, and have been able to process this waste into economic value. One of them is the Garbage Bank which has been used as a place to manage plastic waste from the local community since five years ago, until now it has economic value. "The initiative to form a Garbage Bank is because I often see waste, especially plastic scattered, then an idea arises to collect it," said Garbage Bank Cadre, Maliya, when met in Sidoarjo. Maliya explained that with a container like this, so that waste, especially plastic, can be reduced, not scattered, which is then sorted, if it has collected a lot, it will be sold to collectors. selling the waste has already gotten four wickets of tents and 40 chairs which can then be rented out to residents," he said. saved to buy Posyandu facilities and infrastructure, he said.

The Garbage Bank is collaborating with the zakat house. Not only that, the posyandu for the elderly and toddlers, as well as the TPA take shelter there. Having a container like this can serve as an example for the younger generation in dealing with plastic waste in their respective areas, he said. If this is done, it can be an example for the younger generation in dealing with waste and still protecting the environment," said Suyono (Head of RW 09). other places can also build a Garbage Bank. Until now, the level of public awareness in managing and disposing of waste in its place is quite good, although not all of them are able to implement it on all fronts.

Bags from Waste made by Maliya, one of the housewives in Larangan Village, RT, has recycled plastic waste into an item that has a high economic price in the form of this bag. "Like to be creative with any material, then the idea arose to use plastic waste to make or make it into a bag or wallet," said Maliya, because he wants to reduce the population of plastic waste that people look down on, even though if it is managed, it can have economic value. This home-based business has been running for a year and he has made about 30 pieces. With a month's turnover depending on the goods produced." For a month's turnover is uncertain because it depends on the goods made, in a month I can make one bag or two wallets," he said. The models and innovations are very simple but elegant without eliminating the waste value of the craft. The material is also obtained from collecting garbage around the house with a Garbage Bank in our RT area. "The

price for wallets is around Rp. 35,000 and bags are around Rp. 90,000. On this occasion, Nurul hopes that the presence of artisans can reduce the volume of plastic waste." clean and comfortable," he said.

In this extension activity, the executors of the extension distributed questionnaires about how the community's response was related to the meaning of waste that has economic value which also brings achievements in the environmental sector. The results found that as much as 65.33 % stated that waste brings economic value to income as well as in the field of achievement. The remaining 34.67 % stated that waste management activities were not sufficient to add value to income. This may be due to the possibility that they do not have enough time and are active in activities in the environmental sector and indeed the respondents live in housing. Likewise, the results of filling out questionnaires related to achievements in the field of environmental management, especially waste, which have an economic impact on the community, because by making an outstanding village make this village often visited by other villages and often receive assistance that supports the environment such as plant seeds, plant pots, or monetary donations. This is indicated by the results of filling out that 91.34 % stated that RW 9 residents really support environmental activities, the remaining 8.66% did not respond, possibly due to the busyness of each resident.

Counseling on how to manage waste through a waste bank for inorganic waste and the use of household organic waste for the use of liquid fertilizer (leachate) which comes from settling household waste. This waste bank is routinely carried out in this environment once a month. residents with their own awareness of sorting out recyclable waste by grouping it according to its types. Such as plastic caps, plastic bags , bottles, plastic molto, plastic packaging for washing soap and others. This organic and inorganic waste management activity indirectly brought the environment in RW 09 Larangan Village to achievements in the environmental field, namely obtaining the 2020 Proklam Lestari winner award, so that it often received visits from other cities in East Java such as Blitar .



Figure 1. Garbage Weighing



Figure 2. Blitar City DLH Visit



Figure 3. The 2020 Sustainable Proklim Award

CONCLUSION

Based on the parameters observed through the evaluation method, namely the questionnaire shows that public knowledge and awareness of the importance of waste management so that it has economic value with achievement bonuses in the environmental field. The result is that 65.33% of the residents of RW 09 Desa Larangan housing are mostly active and concerned about waste management so that it indirectly fulfills the criteria, namely not only adding value to residents' income but also economic value in terms of utilizing organic and inorganic waste. The second result regarding environmental achievement also showed a high level of 91.34 % supporting activities related to the environment. So it was concluded that this extension activity had gone according to the objectives planned by the extension workers.

Suggestions and recommendations for the implementation of community service activities are to continue to carry out environmental management and always prepare various more innovations related to waste management in the surrounding environment.

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