Analysis Of The Economic Value Of Waste In Community-Based Waste Management

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Abstract

The waste problem in Indonesia is 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 has achievements in the environmental sector so as to bring blessings of economic value to the welfare of the residents of RW 09 Larangan village. The purpose of this service agenda is 1) Waste management that has economic value can add value to income. 2) Achievements in the environmental field that have an impact on increasing economic value. The method used is the method of question and answer, discussion and evaluation of activities. The results of this service are 1) Waste management shows positive results, namely 65.33% of residents admit that behind the garbage, residents 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 shown from the results of the questionnaire, namely as much as 91.34% support environmental management activities, especially related rubbish.

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Introduction

Garbage is a form of pollution that is equally harmful to the environment. In various regions in Indonesia, the waste problem is becoming more real and complicated (Riyadi, Alhamda, Airlambang, Anggreiny, & Anggara, 2020). The challenge of waste management with increasing population and changes in people's consumption patterns will result in an increase in the volume and type of waste, as well as an increasingly diverse characteristics of waste (Fróna, Szenderák, & Harangi-Rákos, 2019).

The waste management paradigm emphasizes upstream policies with a 3R mindset (reduce, reuse, and recycle) (Pamuji, Nasihuddin, Sukirman, Wahyoeningsih, Muflichah, Asyik, & Darmawan, 2022). The idea of using waste as an energy source is a new idea that says waste is not waste that has no value. This idea can increase the economic value of waste by turning it into energy that can be used by society as a whole (Loni, Najafi, Bellos, Rajaee, Said, & Mazlan, 2021).

The community that cares about waste is expanding in a number of cities and is able to utilize waste in accordance with the 3R (reduce, reuse and recycle) to reap benefits from the circular economy. The way people think about waste has also changed. Now waste has economic value,

it can drive the community's economy. Currently, the waste recycling industry is estimated to only absorb a small amount. In fact, recycling is the basis for converting plastic waste into goods that can be sold for money (circular economy), which reduces the amount of plastic waste produced (Awan, Sroufe, & Shahbaz, 2021).

Nearby, a large number of people continue to burn rubbish, including plastic waste. But due to the toxic white smoke it produces, this is actually harmful to both human health and the environment. You should therefore be able to handle home garbage. In truth, many people are still unsure of how to manage waste at home such that it doesn't harm the environment or human health. Making trash valuable economically or into products that don't hurt the environment is the aim of good waste management. By properly managing home waste, we can lessen the damaging effects of waste on the environment (Mujiono, Rahmawati, Azhari, Fitria, Indria, & Witarsa, 2018).

The damaging effects of garbage on the environment can be lessened with proper household waste management (Fernando, 2019). Here are some waste management strategies that have been compiled from a variety of sources and can be useful. Sort Waste Depending on Type. trash may be broadly categorized into two types: organic trash and inorganic garbage. Prepare two separate trash containers at home, one for each sort of garbage. Organic waste is trash that originates from the environment, such leftover food or fallen leaves. In other terms, organic waste is any trash that may quickly disintegrate. Cans, glass, rubber, and plastic are examples of inorganic trash. Inorganic trash ought to be disposed of in a location with recycling tools or a plastic smelter. 2) Produce organic waste to serve as fertilizer Making compost that may be used for gardening is the simplest approach to handle organic home waste. However, you can give organic waste to friends who enjoy gardening or to plant vendors if you don't enjoy gardening or the smell that composting emits. You can still effectively manage organic waste in this way. 3) Recycling of Inorganic Waste Some inorganic waste, including paper, cardboard, glass, plastic, and cans, can be recycled. On the packaging of the food or drink you have purchased, look for the recycling logo. The food packaging can be recycled if it bears a recycling emblem. You may either donate the inorganic debris to scavengers or take it to the closest waste recycling facility. 4) Recycling of Electronic Waste, Take hazardous garbage that has been separated to a recycling facility. Employees at recycling facilities must understand how to recycle hazardous trash in order to protect the environment. You can return electrical products to the manufacturer if they are broken or have become garbage. Some electronics manufacturers will accept used electronics for recycling into brand-new electronics. The local authority has supplied an e-waste container where you may also dispose of your electronic garbage. Reducing, Reusing, and Recycling Develop a "3R" (or "reduce, reuse, recycle") lifestyle. Reduce your usage of plastic and other hard-to-decompose materials on a regular basis. So that they may be reused, don't forget to utilize old goods. Using recycled plastic bottles to create planters is one example. There are several other used products that may be recycled using your inventiveness. Last but not least, remember to recycle inorganic trash and manage domestic garbage so that the ecosystem continues to benefit.

Waste management that has economic value can help increase family income if it is managed properly (Islam, Nazifa, Yuniarto, Uddin, Salmiati, & Shahid, 2019). 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 Suprapto, Ali, & Nuryadin (2017) using the OSAMA technology approach to process household organic waste into useful liquid fertilizer for plants. This is also done by Pujiono, Restuaji, Mulyati, & Lukis, (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

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 Proklim Lestari winner award, so that it often received visits from other cities in East Java such as Blitar .

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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