

Journal of Human And Education

Volume 4, No. 2, Tahun 2024, pp 136-141 E-ISSN 2776-5857, P-ISSN 2776-7876

Website: https://jahe.or.id/index.php/jahe/index

Household Waste Management Training To Improve The Economy Of Rural Communities

Augustinus Robin Butarbutar^{1*}, Kemmala Dewi², Usman Tahir³, Aris Krisdiyanto⁴, Sri Suparni⁵

Universitas Negeri Manado, Indonesia¹, Universitas 17 Agustus 1945 Semarang, Indonesia², Universitas Sains dan Teknologi Jayapura, Indonesia³, Universitas 17 Agustus 1945 Semarang, Indonesia⁴, Universitas Prabumulih, Indonesia⁵

Email: augustinusbutarbutar@unima.ac.id 1*

Abstract

After discussing with fellow service members/writers involved in this article regarding organic waste management in order to improve the economy of rural communities. The result in this article show 1). Waste is the remains of daily human activities and/or from natural processes in solid form . The rate of waste production continues to increase, not only in line with the rate of population growth but also in line with the increase in people's consumption patterns. On the other hand, the waste handling capacity of the community and local government is not yet optimal. Waste that is not managed properly will affect the environment and the health of the surrounding community.

2). The concept of 3R waste management is no longer foreign to the public. This concept is very suitable to be applied in developing countries which, due to technological limitations, must empower communities as actors who produce waste. However, in reality the application of 3R in everyday life is still far from expected. The principle of Reduce, Reuse, Recycle (3R) which is the spearhead in dealing with waste in the community seems to be just a slogan that doesn't apply. 3). The author/devotee believes that rural communities are smart in utilizing waste from items that have no economic value into useful items that can even become a source of income for rural communities.

Keywords: Household Waste Management, Training, Economy Of Rural Communities

INTRDOUCTION

Waste is the remains of daily human activities and/or from natural processes in solid form (Suyoto, 2008). The rate of waste production continues to increase, not only in line with the rate of population growth but also in line with the increase in people's consumption patterns. On the other hand, the waste handling capacity of the community and local government is not yet optimal. Waste that is not managed properly will affect the environment and the health of the surrounding community (Suyoto, 2008).

Waste is goods or objects that have exhausted their useful value. This definition creates a negative impression which makes waste seen as an object that must be immediately removed from the yard at any cost. Of course, the paradigm regarding the definition of waste must be changed so that people have the awareness to manage their own waste so that environmental problems due to waste can be minimized. Kholil (2004) in (Saribanon, 2009) stated that waste management in the future needs to be more focused on changing the perspective and behavior of the community and prioritizing community involvement in its management (bottom-up) because it has been proven that the top-down approach does not work. effectively.

The concept of 3R waste management is no longer foreign to the public. This concept is very suitable to be applied in developing countries which, due to technological limitations, must empower communities as actors who produce waste. However, in reality the application of 3R in everyday life is still far from expected. The principle of Reduce, Reuse, Recycle (3R) which is the spearhead in dealing with waste in the community seems to be just a slogan that doesn't apply (Jumarianta, 2017).

Changes in people's perspective on waste have occurred in several areas in Yogyakarta, such

as the hamlet of Sukunan, Kelajuran and several other areas. Sukunan Hamlet, for example, residents in the area carry out communal waste management by applying the 3R principles. The waste is sorted in each house and then transported and collected at the Temporary Disposal Site (TPS) which was built independently. Then after the waste is collected, some of the waste is sold and the other part is recycled into useful products or crafts. Empowering the community in managing waste has been able to significantly reduce the amount of waste that must be disposed of at the Piyungan landfill. Apart from that, it increases people's income due to the sale of recycled products produced. This environmental awareness and active role of society can emerge because of a new positive understanding of waste. This new understanding is that waste is leftover goods that have other economic benefits through sorting and recycling processes (Riswan et al., 2012).

Community empowerment in managing waste communally does not always run smoothly. Conflicts of interest are still a major problem in communal waste management. The view that paying levies without having to bother managing waste is enough to be considered as community participation in dealing with waste is also one of the factors in the emergence of this conflict. Social conflicts like this often hamper the active steps that have emerged among a handful of citizens. However, enthusiasm for managing waste should not disappear just because of this conflict. The solution to overcome this problem is independent waste management at the household scale. Household scale waste management can be done with the zero waste concept (Widiarti, 2012).

The zero waste principle is a waste management concept that is based on recycling activities. Waste management is carried out by sorting, composting and collecting goods worth selling (Ika, 2000). According to (Maharani, 2007), reusing, minimizing and recycling waste is something that really needs to be done to reduce waste generation which burdens landfills and the environment. If possible, 3R is carried out from the source of waste generation so that there is a minimization of waste transported to the landfill. This waste recycling and composting concept is able to reduce the generation of waste transported to TPS/TPA in Kebonmanis Village, Cilacap by 75%, namely from 23,638 m3/day to 5,821 m3/day (Ika, 2010).

Waste reduction with the Reduce Reduce concept is a concept to reduce the use of materials that are less environmentally friendly. The implementation of the reduce concept is to reuse used plastic bags that are still suitable for use as containers for goods to be brought back, so that goods brought back do not need new plastic containers. Through the existing shopping program with used bags, in one day each person is able to reduce the rate of waste generation (Rosariawari & Paelongan, 2022).

Reuse is an effort to reuse used goods without undergoing chemical or biological changes. The concept of waste processing using the reuse method can be interpreted as activities that reuse items that are still suitable for use for their proper function or other functions. In this research, the application of the reuse concept was carried out by making used plastic bottles and glass bottles into plant containers and selling them. During field implementation, 35 plastic bottles with a total weight of \pm 0.74 kg and 8 glass bottles of various sizes with a total weight of 4.09kg were used as planting media and crafts by residents (Larasati & Santoso, 2023).

Recycling organic waste is done by turning organic waste into compost. According to (Pandebesie, 2005)) the composting process is the easiest and most economical organic waste processing process to implement and the composting process also has a very minimal negative impact on the environment. Referring to this theory, in practice the organic waste recycling method implemented is by composting organic waste. Composting using the takakura method is a method of composting organic waste on a home scale using a basket that uses the concept of aerobic composting where the growth of microorganisms in managing waste requires air as an important intake. Referring to the theory above, the research carried out used the takakura method to process organic waste into compost.

Waste management in the formal sector refers to the government sector, the Environmental Service at the city level is responsible for the process of handling waste at the household level, providing supporting facilities for waste management, and reducing the effects of waste generation. In the informal sector, the community is the main actor in driving the system. There are environmentally conscious social groups that form regular campaigns in an effort to increase environmental awareness and implement a "junk diet" (Awasthi, 2021). Apart from that, there are also small business actors who play a role in collecting waste, as well as people who are members of waste banks. The private sector can also play a role in waste management activities through collaboration with city governments in realizing a circular economy through infrastructure assistance and funding through CSR (Patricio, 2018).

In order to help the implementation of organic waste management run smoothly, the author took the initiative to conduct outreach in several villages regarding household waste management. The author also does not deny that this program could be more effective if it received support from the local government and staff holders considering the limited capital, power and human power they

have.

METHOD

After discussing with fellow service members/writers involved in this article regarding organic waste management in order to improve the economy of rural communities. The stages of finding problems and solutions in this service include the following:

Figure 1 **Problem Discovery Scheme** Observe the problem for 2 weeks Find cleanliness problems Potential for organic waste managemen Propose to local authorities

RESULT AND DISCUSSION

Waste and Waste Management

Waste is the remains of daily human activities and/or from natural processes in solid form (Suyoto, 2008). The rate of waste production continues to increase, not only in line with the rate of population growth but also in line with the increase in people's consumption patterns. On the other hand, the waste handling capacity of the community and local government is not yet optimal. Waste that is not managed properly will affect the environment and the health of the surrounding community (Suyoto, 2008).

Waste is goods or objects that have exhausted their useful value. This definition creates a negative impression which makes waste seen as an object that must be immediately removed from the yard at any cost. Of course, the paradigm regarding the definition of waste must be changed so that people have the awareness to manage their own waste so that environmental problems due to waste can be minimized. Kholil (2004) in (Saribanon, 2009) stated that waste management in the future needs to be more focused on changing the perspective and behavior of the community and

prioritizing community involvement in its management (bottom-up) because it has been proven that the top-down approach does not work. effectively.

The concept of 3R waste management is no longer foreign to the public. This concept is very suitable to be applied in developing countries which, due to technological limitations, must empower communities as actors who produce waste. However, in reality the application of 3R in everyday life is still far from expected. The principle of Reduce, Reuse, Recycle (3R) which is the spearhead in dealing with waste in the community seems to be just a slogan that doesn't apply (Jumarianta, 2017).

Changes in people's perspective on waste have occurred in several areas in Yogyakarta, such as the hamlet of Sukunan, Kelajuran and several other areas. Sukunan Hamlet, for example, residents in the area carry out communal waste management by applying the 3R principles. The waste is sorted in each house and then transported and collected at the Temporary Disposal Site (TPS) which was built independently. Then after the waste is collected, some of the waste is sold and the other part is recycled into useful products or crafts. Empowering the community in managing waste has been able to significantly reduce the amount of waste that must be disposed of at the Piyungan landfill. Apart from that, it increases people's income due to the sale of recycled products produced. This environmental awareness and active role of society can emerge because of a new positive understanding of waste. This new understanding is that waste is leftover goods that have other economic benefits through sorting and recycling processes (Riswan et al., 2012).

Community empowerment in managing waste communally does not always run smoothly. Conflicts of interest are still a major problem in communal waste management. The view that paying levies without having to bother managing waste is enough to be considered as community participation in dealing with waste is also one of the factors in the emergence of this conflict. Social conflicts like this often hamper the active steps that have emerged among a handful of citizens. However, enthusiasm for managing waste should not disappear just because of this conflict. The solution to overcome this problem is independent waste management at the household scale. Household scale waste management can be done with the zero waste concept (Widiarti, 2012).

The zero waste principle is a waste management concept that is based on recycling activities. Waste management is carried out by sorting, composting and collecting goods worth selling (Ika, 2000). According to (Maharani, 2007), reusing, minimizing and recycling waste is something that really needs to be done to reduce waste generation which burdens landfills and the environment. If possible, 3R is carried out from the source of waste generation so that there is a minimization of waste transported to the landfill. This waste recycling and composting concept is able to reduce the generation of waste transported to TPS/TPA in Kebonmanis Village, Cilacap by 75%, namely from 23,638 m3/day to 5,821 m3/day (Ika, 2010).

Waste reduction with the Reduce Reduce concept is a concept to reduce the use of materials that are less environmentally friendly. The implementation of the reduce concept is to reuse used plastic bags that are still suitable for use as containers for goods to be brought back, so that goods brought back do not need new plastic containers. Through the existing shopping program with used bags, in one day each person is able to reduce the rate of waste generation (Rosariawari & Paelongan, 2022).

Reuse is an effort to reuse used goods without undergoing chemical or biological changes. The concept of waste processing using the reuse method can be interpreted as activities that reuse items that are still suitable for use for their proper function or other functions. In this research, the application of the reuse concept was carried out by making used plastic bottles and glass bottles into plant containers and selling them. During field implementation, 35 plastic bottles with a total weight of \pm 0.74 kg and 8 glass bottles of various sizes with a total weight of 4.09kg were used as planting media and crafts by residents (Larasati & Santoso, 2023).

Recycling organic waste is done by turning organic waste into compost. According to (Pandebesie, 2005)) the composting process is the easiest and most economical organic waste processing process to implement and the composting process also has a very minimal negative impact on the environment. Referring to this theory, in practice the organic waste recycling method implemented is by composting organic waste. Composting using the takakura method is a method of composting organic waste on a home scale using a basket that uses the concept of aerobic composting where the growth of microorganisms in managing waste requires air as an important intake. Referring to the theory above, the research carried out used the takakura method to process organic waste into compost.

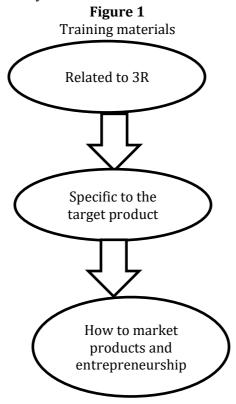
Waste management in the formal sector refers to the government sector, the Environmental Service at the city level is responsible for the process of handling waste at the household level, providing supporting facilities for waste management, and reducing the effects of waste generation. In the informal sector, the community is the main actor in driving the system. There are environmentally conscious social groups that form regular campaigns in an effort to increase environmental awareness and implement a "junk diet" (Awasthi, 2021). Apart from that, there are

also small business actors who play a role in collecting waste, as well as people who are members of waste banks. The private sector can also play a role in waste management activities through collaboration with city governments in realizing a circular economy through infrastructure assistance and funding through CSR (Patricio, 2018).

In order to help the implementation of organic waste management run smoothly, the author took the initiative to conduct outreach in several villages regarding household waste management. The author also does not deny that this program could be more effective if it received support from the local government and staff holders considering the limited capital, power and human power they have.

Household Waste Management Training To Improve The Economy Of Rural Communities

Based on the comprehensive explanation above regarding waste and its management, the author believes that society can change things that are of no value into things that are of value which can increase the income and economy of rural communities. As for outreach materials:



The great hope of the author/devotee is that the three materials presented and practiced during the training can become literacy that can be immediately put into practice so that it can overcome hygiene problems in villages and improve the economy of rural communities. The author also does not deny that the local government and its staff holders are needed to make this program more significant.

CONCLUSION

Based on the explanation above, several things can be concluded regarding waste management training in order to improve the economy of rural communities as follows:

- 1. Waste is the remains of daily human activities and/or from natural processes in solid form . The rate of waste production continues to increase, not only in line with the rate of population growth but also in line with the increase in people's consumption patterns. On the other hand, the waste handling capacity of the community and local government is not yet optimal. Waste that is not managed properly will affect the environment and the health of the surrounding community.
- 2. The concept of 3R waste management is no longer foreign to the public. This concept is very suitable to be applied in developing countries which, due to technological limitations, must empower communities as actors who produce waste. However, in reality the application of 3R in everyday life is still far from expected. The principle of Reduce, Reuse, Recycle (3R) which is the spearhead in dealing with waste in the community seems to be just a slogan that doesn't apply.
- 3. The author/devotee believes that rural communities are smart in utilizing waste from items that have no economic value into useful items that can even become a source of income for rural communities.

EXPRESSION OF THANKING

Based on the explanation above, the author would like to express his deepest gratitude to village officials, academics, and all other parties involved in collecting sources, analyzing data, and other stages in writing this article. Without them, the author believes this article could not have been organized and written properly.

REFERENCES

- Afriza Fahmi, P. (2021). Perkembangan Teknologi 5G. *Journal of Information Technology*, *January*, 1–7. https://doi.org/10.13140/RG.2.2.29967.00166
- Agboje, O. (2016). Comparative Analysis of GPON and DLS Access Technologies for Enhancing Broadband Interener Penetratin in Nigeria. *International Journal off Applied Information Systems* (*IJAIS*), 10(8), 22.
- Andalisto, D., Saragih, Y., & Ibrahim, I. (2022). Analisis Kualitatif Teknologi 5G Pengganti 4G Di Indonesia. *Jurnal Edukasi Elektro*, 6(1), 01–09. https://doi.org/10.21831/jee.v6i1.47021
- Ariyanti, S. (2 C.E.). Studi Pengukuran Digial Divide di Indonesia. *Buletin Pos Dan Telekomunikasi*, 11(4), 281–292.
- Awasthi, A. K. (2021). Zero waste approach towards a sustainable waste managemen. *Environment and Sustainability*, *3*(122). https://doi.org/https://doi.org/10.1016/j.resenv.2021.100014
- Bender, D. (2016). DESA Optimization of variable structure Modelica models using custom annotations. *ACM International Conference Proceeding Series*, 18-April-2(1), 45–54. https://doi.org/10.1145/2904081.2904088
- Ginting, M. D. (2017). IMPLEMENTASI DESA BROADBAND TERPADU (studi pada Enam Desa Penerimaan Program Desa Broadband Terpadu di Daerah Perbantasaan). *Transekonomika: Akuntansi, Bisnis Dan Keuangan, 18*(1), 19–30.
- Ika, D. (2010). Pengelolaan Sampah Menuju Zero Waste di Kelurahan Kebonmanis Cilacap. *Eprints Undip*, 21(1), 22.
- Jiang, M. (2016). Prioritization in 5G Mobile System Euro. *Euro*, 21(2), 1–16.
- Jumarianta. (2017). ENGELOLAAN SAMPAH RUMAH TANGGA (STUDI PENELITIAN DI DESA KARANG INTAN KECAMATAN KARANG INTAN KABUPATEN BANJAR). *Jumarianta*, 2(2), 118–125.
- Larasati, A. F., & Santoso, E. B. (2023). Jaringan Pengelolaan Sampah Rumah Tangga sebagai Bentuk Transisi Ekonomi Sirkular di Kota Surabaya. *Jurnal Ilmu Lingkungan*, 22(1), 248–257. https://doi.org/10.14710/jil.22.1.248-257
- Maharani, E. S. (2007). Karakteristik Sampah dan Persepsi Masyarakat Terhadap Pengelolaan Sampah di Kecamatan Banyuwangi Kabupaten Banyuwangi Provinsi Jawa Timur. *Ecotropic*, *2*(1), 1–8.
- Pandebesie, E. S. (2005). Teknik Pengelolaan Sampah. Institut Teknologi Sepuluh Nopember.
- Patricio, J. (2018). Enabling industrial symbiosis collaborations between SMEs from a regional perspective. *Journal of Cleaner Production*, 202(1), 1120–1130.
- Riswan, R., Sunoko, H. R., & Hadiyarto, A. (2012). Pengelolaan Sampah Rumah Tangga Di Kecamatan Daha Selatan. *Jurnal Ilmu Lingkungan*, 9(1), 31. https://doi.org/10.14710/jil.9.1.31-38
- Rosariawari, F., & Paelongan, A. (2022). Penerapan Konsep Pengelolaan Sampah Rumah Tangga Dengan Metode 5R (Reduce, Reuse, Recycle, Replace, and Replant) Berbasis Masyarakat Di Wilayah Kebraon Kota Surabaya. *EnviroUS*, 2(2), 63–69. https://doi.org/10.33005/envirous.v2i2.112
- Saragih, Y. (2017). Kebijakan Pemerintah Tentang Kelayakan Fixed Wireless Access- CDMA (FWA-CDMA) Unuk Komunikasi Murah di Pedesaan. *Barometer*, 1(2), 22.
- Saribanon, N. (2009). Perencanaan Sosial dalam Pengelolaan Sampah Permukiman Berbasis Masyarakat di Kotamadya Jakarta Timur. *Forum Pascasarjana*, *32*(32), 143–153.
- Suyoto. (2008). Rumah Tangga Peduli Lingkungan. Prima Media.
- Widiarti, I. W. (2012). Pengelolaan Sampah Berbasis "Zero Waste" Skala Rumah Tangga Secara Mandiri. *Jurnal Sains & Teknologi Lingkungan*, 4(2), 101–113. https://doi.org/10.20885/jstl.vol4.iss2.art4