

# Implementation of Waste Management Policy with 3R Principles (Reduse, Reuse, Recycle) in the Gorontalo City

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**Abstract.** *This study aims to obtain information about the Effectiveness of Terminal Type A. Isimu in Gorontalo District, the research method uses qualitative type. Data collection techniques were carried out through interviews with a number of informants and observations and recording secondary data related to the research problem. The results of the study concluded that the achievement of the objectives showed that the existence of the Isimu Type A Terminal had not been effectively seen from the human resources owned and the infrastructure owned by the terminal was incomplete and not maintained. Whereas the other factor is the low awareness of the community in utilizing the terminal. So that the achievement of objectives has not been effective. While the Integration shows that communication between users and related parties is less than the maximum, it needs to be improved through socialization to increase understanding of service users. The Adaptation Indicator shows the benchmarks of the procurement and workforce filling process in supporting employee performance is not yet effective, seen from the lack of personnel and the lack of quality resources to support the effectiveness of the Isimu type A terminal.*

**Keywords:** *Implementation; Policy; Waste; Management*

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## INTRODUCTION

Solid waste management systems, especially for urban areas, must be implemented in a precise and systematic manner. Solid waste management activities will involve the use and utilization of various waste infrastructure and facilities which include container, collection, transfer, transportation, processing and final disposal. The problem of waste is closely related to the lifestyle and culture of the community itself. Therefore, waste management is not only a government affair, but its handling requires broad community participation (Sahil, 2016).

Waste management aims to improve public health and environmental quality as well as turn waste into a resource and the government is tasked with ensuring the implementation of good and environmentally friendly waste management. Waste processing can be defined as the treatment of waste which aims to reduce or eliminate problems related to the environment. In environmental health science, a waste treatment is considered good if the processed waste does not become a breeding ground for disease germs and does not become an intermediary for the spread of a disease. Other requirements that must be fulfilled are that it does not pollute the air, water or soil, does not cause odors, and does not cause fire. Solid waste is an important issue in urban environmental problems that are faced in line with population growth and increasing development activities. The increase in the volume of waste is growing exponentially which has not been accompanied by an increase in local government revenue which is commensurate with municipal solid waste management (Chamdra et al., 2015).

It is time for the waste management paradigm that relies on the final approach to be abandoned and replaced with a new paradigm of waste management. The new paradigm views waste as a resource that has economic value and can be utilized. In the old paradigm, waste has not been seen as a resource, so we need a new perspective that sees waste as a resource, namely the concept of 3 reduce, reuse and recycle. With this new perspective, waste must be seen as a valuable resource so that its selection and use must be carried out wisely.

Comprehensive handling of waste, whether on land or sea, is closely related to the quality of human resources (HR). This is the main key to handling waste that is currently being carried out by Indonesia. Without qualified human resources, it is believed that treatment will not work and it could even get worse. Moreover, the concept of reduce, reuse and recycle is a concept that involves qualified human resources in solid waste management. In order to achieve conditions for people who live healthy and prosperous in the future, it is necessary to have a healthy residential environment. From the aspect of solid waste, the word healthy will mean a condition that will be achieved if the waste can be managed properly so that it is clean from the residential environment where humans are active in it. The environmental problem that has always been a big issue in almost all urban areas is the problem of waste. The increase in the amount of waste that is not balanced with environmentally friendly management will cause environmental damage and pollution (Sulistiyorini et al, 2016).

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Solid waste management is the responsibility of the regions to regulate and manage it, this division of authority is directly carried out by the regional government both in terms of financing and the process of providing the necessary regional infrastructure, the goal is to achieve effectiveness by issuing regional policies in the form of regional regulations, and the level of government seriousness in carrying out urban structuring. It is hoped that regional autonomy can be independent in the process of development and waste management so that it does not depend solely on the central government (Said & Noor, 2015).

The Gorontalo City Government as an autonomous region has also regulated governance regarding solid waste management by taking policies through the Gorontalo City Regional Regulation Number 12 of 2017 concerning Waste Management. The Regional Government determines policies and strategies for reducing and overcoming regional waste by adjusting them to regional conditions and referring to regional waste management policies and strategies. In this regulation, waste reduction includes restrictions on waste generation, waste recycling and waste reuse. Waste reduction is carried out by using reusable materials, materials that are recycled and / or materials that are easily broken down by natural processes, collecting and handing back waste from products or packaging that have been used. To increase the effectiveness of waste control, the Gorontalo City Sanitation Office has optimized the principle of reduce, reuse and recycle (3R) by building a number of composter units that use organic waste to become compost.

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The problem that then arises from the implementation of waste management policy implementation in Gorontalo according to the results of observations made by previous authors is regarding the volume of waste in Gorontalo City and the number of fleets is not appropriate, making it difficult for the Gorontalo City Environmental Service (DLH) to transport waste every day. Furthermore, there is a fee mechanism that must be issued by the community but it does not run smoothly, even though this fee is used to pay the salaries of waste collectors and managers.

Then from the results of the observation the writer then saw from a number of institutional aspects that were given the authority to manage waste at this time only the Department of Environment, City Planning and Rural Affairs, but no organizations or non-governmental organizations that care about the environment have not been interested in handling waste. The aspect of waste management financing provided through the APBD is still insufficient. Not to mention the matter of waste management planning that cannot be carried out because there is no land for waste processing and waste volume calculation activities for each district are still being carried out. Then there is a coordination relationship that has not been actively developed between non-governmental organizations as the person in charge in their respective areas with waste managers and transporters. In addition, the community still thinks that this program will have a negative impact if the management is carried out in their area. Besides, the officers have not carried out waste management based on the technical guidelines provided by the government

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Of course, if you look at the description of the description of the implementation carried out by the Gorontalo City Government, if it is related to the policy concept, it can be seen that there are problems in the implementation of the policy, even though in achieving a policy goal the implementation of policies is very important as stated by Tahjan, (2008) that policy implementation public can be defined as the activity of completing or implementing a public policy that has been determined / approved by the use of means (tools) to achieve policy objectives.

In principle, policy implementation is a way for a policy to achieve its goals, and is a crucial stage of a public policy concept, because without good implementation, policies will feel futile

(Nugroho, 2003, Dwijowijoto, 2004). It is likewise noticable that policy evaluation is equally important that it may determine the sustainability of the program (Akbar& Mohi, 2018). From some of these explanations, it is illustrated that policy implementation is a serious stage that requires effort to implement it by involving existing resources and a good coordination relationship is needed to implement it.

Several previous studies have been carried out by several previous researchers / writers, for example by Zakaria, RO (2014), with the title implementation of the Sidoarjo Clean and Green Study program at the Office of Cleanliness and Gardening, Sidoarjo Regency, and research conducted by Ulfarida, G. (2017), with the title Implementation of the 3R Program (Reuse, Reduce, and Recycle) through a waste bank in an effort to community-based waste management in the city of Bandar Lampung.

In general, research conducted by several previous studies focuses on discussing implementation in solid waste management, which is in principle the same as this study. However, there are several things that differ both in focus, method and concept from previous studies.

The purpose of the research carried out in this paper is to focus on discussing how the implementation of policies from the Gorontalo City Government with the 3R Principle (Reduse, Reuse, Recycle) which takes one of the Self-Help Groups (KSM), named KSM Setiatama in Gorontalo City.

## **METHODS**

This study used a qualitative approach with descriptive research type because the aim was to reveal and describe facts about the implementation of solid waste management policies with the 3R principle in one of the Community Self-Help Groups (KSM), namely KSM Setiatama in Gorontalo City. The method used in solving the problem includes the method of analysis. The methods used in the completion of the research are listed in this section.

The data sources in this study were primary and secondary data. Primary data were obtained from informants / key informants, which in this study were as many as 8 people, among others: Head of Gorontalo City Environmental Service; Head of Garbage Division at DLH Gorontalo City; Chairman of KSM Setiatama; 3R managers in KSM Setiatama and several communities in the KSM Gorontalo City. Secondary data is obtained from reference searches, be it journal articles, books related to research conducted both online and manually.

The data collection techniques carried out were interviews, observation and documentation in the field.

## **RESULTS AND DISCUSSION**

This study used a qualitative approach with descriptive research type because the aim was to reveal and describe facts about the implementation of solid waste management policies with the 3R principle in one of the Community Self-Help Groups (KSM), namely KSM Setiatama in Gorontalo City. The method used in solving the problem includes the method of analysis. The methods used in the completion of the research are listed in this section.

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## CONCLUSIONS

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The main problems that will be presented in this section are the Implementation of Waste Management Policies with the 3R Principles (Reduce, Reuse, Recycle) in the Setiatama Community Self-Help Group (KSM), Gorontalo City.

Interviews are one way to get information from informants about the Implementation of 3Rs (Reduce, Reuse, Recycle) Waste Management Policy in the Setiatama Community Self-Help Group (KSM), Gorontalo City, with 8 informants who were interviewed. The informants were divided into two categories, namely 4 people from the government apparatus and others from members of the community. Interviews were conducted with both parties between the village government and the community.

In terms of the concept used to assess policy implementation is to use the concept / model proposed by Van Metter and Van Horn. According to Van Meter and Van Horn in (Winarno, 2012) explaining that the variables that affect the process of implementing public policy are:

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### 1. Basic measures and policy objectives

In conducting an implementation study, the objectives and targets of a program to be implemented must be identified and measured because implementation cannot be successful or it will fail if these objectives are not considered. In determining baseline measures and goals, we can use statements from decision makers as reflected in many documents, such as regulations and program guidelines that state the criteria for evaluating policy performance. However, in some cases basic measures and policy objectives must be educated by the individual researcher. Ultimately, the choice of achievement measures depends on the goals supported by the research.

### 2. Sources of policy

These sources include funds or other incentives that encourage and facilitate effective implementation. In policy implementation practice, we often hear officials and implementers say that we do not have enough funds to finance the programs that have been planned. Thus, in some cases the size of the funds will be a determining factor in the success of policy implementation

### 3. Communication between organizations and implementation activities

Implementation will run effectively if the measures and goals are understood by individuals who are responsible for policy performance. As such, it is imperative to pay great attention to clarity of basic measures and policy objectives. The accuracy of communication with the implementers, and the consistency or uniformity of the basic measures and objectives communicated with various sources of information.

#### 4. Characteristics of the implementing organization

The characteristics of these implementing agencies cannot be separated from the bureaucratic structure. The bureaucratic structure is defined as the characteristics, norms and patterns of relationships that occur repeatedly in executive bodies that have a potential or real relationship with what they have in implementing policies.

#### 5. Economic, social and political conditions

While the impact of these factors on policy implementation has received little attention, according to Van Meter and Van Horn, these factors have a profound effect on the planning of implementing agencies.

#### 6. Attitudes / tendencies implementers (implementors)

Three elements of implementer responses that may affect their ability and willingness to implement policies, namely: cognition (comprehension, understanding) of policy, the type of response to it (acceptance, neutrality, rejection) and the intensity of the response.

Policy implementation is a very important stage in the overall policy structure. Policy will only be a dream on paper if it is not implemented. Likewise with the implementation of this Waste Bank, policies must be implemented because the policy process is influenced by the level of success in achieving goals.

The government establishes a mechanism for managing household waste and household-like waste through Law Number 18 of 2008 Article 20 Paragraph (1) concerning Waste Management with the 3R Reduce concept: reduction of waste, Reuse: limiting waste piles, Recycle: recycling of waste and / or reuse of waste. Waste management with the community-based 3R concept aims to reduce waste from its source, reduce environmental pollution, provide benefits to the community, and can change people's behavior towards waste. Waste management with the 3R concept is determined by community participation by changing people's behavior, from disposing of waste to "managing" waste behavior.

#### 5. Economic, social and political conditions

Based on the Regulation of the State Minister for the Environment Number 13 of 2012 concerning Guidelines for the Implementation of Reduce, Reuse and Recycle through the Waste Bank, the Waste Bank is one of the central government programs aimed at reducing the volume of waste transported to the landfill so that a comprehensive and integrated waste management is required. from upstream to downstream in order to provide economic benefits, be healthy for the community and safe for the environment and can change people's behavior. Based on the research results and findings, several things were found as follows: 6. The attitudes / tendencies of the implementers (implementors).

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### 1. Size / Policy Objectives

The implementation of waste management policies with the 3R principle (Reduce, Reuse, Recycle) in terms of the size or objectives of waste management with the 3R principle has not been fully implemented properly based on the stated objectives. In general, the community has not been able to manage waste according to the 3R method, and there is a lack of socialization from both the local government and from environmental care parties and academics. This makes the objectives of the 3R waste management policy not yet measurable.

Based on observations and observations of researchers in the field related to the implementation of the 3R waste management objectives, it still needs to be reviewed because in terms of human resources that are less qualified in operating the infrastructure owned in several Garbage Banks such as plastic chopping machines so that in making plastic material crafts these are chopped manually and there is no motor for transporting waste from each unit to the central. There is a garbage lift that is only limited and sometimes fits in a damaged state. This makes the goal to hinder the process rather than the implementation of waste management.

### 2. Sources of policy

These sources include funds or other incentives that encourage and facilitate effective implementation. In policy implementation practice, we often hear officials and implementers say that we do not have enough funds to finance the programs that have been planned. Thus, in some cases the size of the funds will be a determining factor in the success of policy implementation

The conclusion from the research results is that funding in the implementation of waste management based on the 3R principle at KSM Setiatama is the constraint on the insufficient costs both for operational costs and participation from the community. This is a concern for the government where an implementation will be hampered if one of the supporting factors is inadequate. Apart from funding, the success of the policy implementation process really depends on the ability to utilize available resources. Humans are the most important resource in determining a successful implementation process

### 3. Communication between organizations and implementation activities

According to the conclusion of the research results that 3R waste management is still not understood by some people, due to the lack of communication in the form of socialization carried out by the government, which hinders the policy implementation process.

The observations of researchers in the field are not yet comprehensive. Because some members of KSM and the community do not understand waste management using the 3R method. But in action, people are not used to it and feel reluctant to manage and classify household waste according to the method.

Implementation Implementation will run effectively if the measures and goals are understood by individuals who are responsible for policy performance. As such, it is imperative to pay great attention to clarity of basic measures and policy objectives. The accuracy of communication with the implementers, and the consistency or uniformity of the basic measures and objectives communicated with various sources of information

### 4. Economic, Social and Political Environment

In an active environment, of course there are people who are also in accordance with Law No. 23 1997 Chapter 1 Article 1: The environment is "the unity of space with all objects, forces,

conditions and living things, including humans and their behavior, which affect the continuity of life and the welfare of humans and other living things.

The impact of the socio-economic and political environment is of course very influential in an implementation, especially regarding waste management which is generally related to the environment and society is a collection of people living in a certain area for a long time, who have rules that govern them, to get to the same goal.

In accordance with the conclusion of the research results from the interview results, the conclusion is that so far the perceived impact is balanced, meaning that 3R waste management is running well but not optimal, because as far as waste management is still causing negative impacts that arise.

#### 5. Implementor Attitude (implementation)

The attitude of acceptance or rejection of the implementer will greatly affect the success or failure of the performance of policy implementation. This is very possible because the policies implemented are not the result of the formulation of local residents who are well acquainted with the problems and problems that have occurred. As with the implementation of 3R waste management, which must get the attention of the authorities or policy makers. Three elements of implementer responses that may affect their ability and willingness to implement policies, namely: cognition (comprehension, understanding) of policy, the type of response to it (acceptance, neutrality, rejection) and the intensity of the response.

The concept of waste processing is related to the attitude of the community itself, which must be accompanied by community empowerment. Community empowerment in this case is to make the community have the power or strength to be able to manage waste so that it becomes something useful and valuable.

From the description above, it is based on evaluation indicators which refer to policy implementation indicators to see the extent to which objectives are achieved and the implementation of objectives.

Based on this theory, it can be concluded that government policy is good where all aspects of the policy can be assessed, but not all have run optimally because there are still obstacles that are encountered. If after the implementation of public policy activities it turns out that the impact is not able to solve the problems currently facing the community, it can be said that a policy activity has failed, but sometimes a public policy results are not immediately effective in the short term, but after going through a certain process.

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