



Evaluation of Waste Management Policy Formulation: Case Study of Implementation of Tomohon Mayor Regulation Number 30 of 2019

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Article Info

Article history:

Received 12 December 2023

Received in revised form 5

January 2024

Accepted 13 January 2024

Keywords:

Policy formulation

Management

Rubbish

Abstract

Waste is one of the many urgent problems to be resolved by local governments. Various regulations have been established. However, in its implementation it is faced with various obstacles. Failure in a policy is not only seen from the implementation aspect. However, it can also be studied from the formulation aspect. Researchers examined the Waste Management Policy Formulation by the Tomohon City Government. With the focus of the study on the policy formulation process, examine and analyze why the presence of Tomohon Mayor Regulation Number 30 of 2019 has not succeeded in overcoming the problem of waste accumulation and management at the Tomohon City Waste Final Processing Site located in Taratara Village. The research design used is qualitative. The research findings were that the problem analysis stage did not work because the preparation of Jakstrada only followed directions from the center through the pocket book for the preparation of Jakstrada which is a derivative of Jakstranas without any research or problem identification process. The development of measures process which is lacking in deepening the problem results in not maximizing the measurement of situations or conditions to formulate appropriate policies. The determination of impacts process was not carried out to estimate the level of success of the policies made. Budgeting problems were discovered which resulted in the policies that had been set not being able to run according to what was set and required in the waste management process.

Introduction

Tomohon City is a city in the province of North Sulawesi. Starting from a sub-district in Minahasa Regency, North Sulawesi, Tomohon experienced progress in its development so that in 2003 Tomohon succeeded in upgrading from sub-district status to Tomohon City. Making its debut as an autonomous region with the passing of Law Number 10 of 2003. Having a population of 101,020 people (Dukcapil Service 2022) makes Tomohon the fourth position in terms of population density in all districts/cities in North Sulawesi, surpassing 12 other districts/cities. Of course, this high population density has its own positive and negative impacts on the course of social life. The positive impacts include increasing the number of human resources (HR) in society, increasing production, large entrepreneurial opportunities, increasing national solidarity, increasing work innovation, and increasing the number of business locations. The negative impact is the emergence of social problems such as unemployment, poor health services, increasing crime rates, slum housing, unhealthy living environments.

An unhealthy living environment is caused by waste problems in the area where you live. The positive impacts of high population density, such as increased production, large entrepreneurial opportunities, increased job innovation, and an increase in the number of business locations,

can actually have their own negative impacts, especially regarding the problem of rapidly increasing waste production. Work innovation and the increase in the number of business locations can be seen from the number of Tomohon City Small and Medium Industrial Enterprises which reached 1,352 business units as calculated in the latest data from the Tomohon City Regional Trade and Industry Office in 2021. This number helps the community in the economy, apart from being a a field of income for each individual business actor (a term for people who have their own SMEs or Small and Medium Industries), this industry has also succeeded in providing employment opportunities for other people. However, this results in an increasing amount of waste being produced along with the level of production of goods in these small and medium industries. It is recorded that the estimated waste production in the city of Tomohon can reach 70 tons per day (Tomohon City Environmental Service Data, 2021).

In 2021, the phenomenon of waste production, which is estimated to reach 70 tons per day, means that waste production in the city of Tomohon is recorded as being relatively high, with the type of waste being household waste. The production of this much waste has become a polemic because along with technological developments and population growth, the amount and type of waste continues to increase. Starting from organic waste that is easily decomposed, inorganic waste that is difficult to decompose, to B3 waste which is dangerous and toxic. This waste is produced every day. This is a serious threat because the rate of waste production is inversely proportional to the rate of waste management solutions. It can be said that the rate of waste management in the Tomohon City area is still far behind.

Tomohon city waste management is carried out at the Tomohon city waste landfill located in Taratara sub-district. This waste landfill began operating in 2012 until now, around 11 years. When it was first built, this landfill had an area of around five hectares and was managed by the Tomohon City Distarumansa (Spatial Planning, Parks and Waste Service). Waste collected from all over the city of Tomohon is collected at this landfill and then managed. Then, in 2015, waste management at this landfill was transferred to the Tomohon City Environmental Service after the waste division of the Spatial Planning, Parks and Waste Service merged with the Tomohon City Environmental Service.

In this regard, if we review it according to the Minister of Home Affairs Regulation Number 33 of 2010 concerning Waste Management Guidelines and several regulations of the Minister of the Environment and the Minister of Public Works which are implementing regulations of Law Number 18 of 2008 concerning Waste Management, the meaning of the abbreviation TPA is is a final waste processing site, not a final waste disposal site. What turns out, up to now, has often been misinterpreted by the public, perhaps even by some parties from the government. It can be seen that every time researchers ask the public what TPA stands for, the answer is mostly final disposal site. Even the media that covered the news about this TPA, wrote news where the abbreviation for TPA was written as Final Disposal Place. It can be seen from news articles published by manado.tribunnews.com in February 2012, and June 2021 and August 2021. In every news item published about TPA Taratara, the abbreviation is always written as Final Waste Disposal Site.

This misunderstanding certainly has its own impact, where parties think that waste that goes to the landfill does not need to be processed again. In fact, if you look at it, a landfill is a place for final processing of waste, namely a place to process and return waste to environmental media in a safe manner for humans and the environment. So far, it has become a final landfill where the rubbish after arriving at the landfill is even more piled up and piled up. Even now, the area targeted to be used as a waste processing site is actually increasing as the amount of waste increases (the size of the landfill when it was built was approximately five hectares, now

it has increased by three hectares, to approximately eight hectares) which if over time is left and not handled optimally and seriously, the area could be further expanded, especially since the current condition of the landfill is almost full with the landfill capacity remaining at 6,400m³ with an estimate of around 38-40 tonnes of waste going to the landfill per day (latest Environmental Service data, 2023). And the impact is not trivial for the community around the sub-district where the researcher lives, several impacts that are possible and have already occurred are (1) Inhibiting plantation activities, because in this area the landfill is in the plantation area of Taratara 1 sub-district. (2) Environmental air pollution. (3) Disease outbreaks, because waste that is mixed up and not processed properly can be the cause of the birth of viruses or germs or disease bacteria. This can attack local residents and even those responsible for processing waste there.

Apart from the negative impacts above, there is also a problem where the waste trucks tasked with carrying waste from all areas of Tomohon city to the landfill in Taratara 1 sub-district almost always have excess capacity. This is certainly not good, apart from endangering the safety of the officers in the transport truck and the public who pass the waste transport truck, there could be a traffic accident. There is also the problem of overloading causing some of the rubbish to fall on the road as the truck passes, especially on quite winding roads. Of course, this can actually cause a clean environment to become dirty.

As for the ideas and information that researchers found, quoted from *Tribun Manado* (14 June 2021) "We have an agreement with the Governor and there will be an MoU where Taratara will not become a landfill. "The landfill will be moved," said Wenny Lumentut, who is the deputy mayor of Tomohon. This of course brings new problems regarding the waste management process in Tomohon City. Before the Taratara TPA was built and operated, the Tomohon city TPA was previously located in the Pangolombian sub-district of Tomohon city. After the landfill in Pangolombian was full and could not accommodate any more waste, the location of the landfill was then moved to Taratara sub-district. If this happens continuously, it will certainly damage many environments in the city of Tomohon. If each landfill location is full and then the landfill location is moved to another place, of course it will worsen the natural conditions in the city of Tomohon because instead of the waste collected from the community being processed and processed to preserve nature and the environment, it will instead be left behind and a new location will be built. . Construction in a new location, which has the potential to damage the nature around the new location, is also caused by the party responsible for managing waste not yet proving that it can manage waste in the new location optimally, reflecting on waste management problems in the previous location.

In an effort to handle this waste, the local government has made regulations, namely Tomohon Mayor Regulation Number 30 of 2019 concerning policies and strategies for the City of Tomohon (Jakstrada) in managing household waste and similar types of household waste. Until 2021, at least Tomohon City will achieve its waste reduction target of 13.97% (3,650.6 tonnes) and waste handling of 73.32% (19,152.55 tonnes) of the total estimated waste generation of 26,136.88 tonnes. With a target of 2025, waste reduction will be 30% and waste handling will be 70% (Environmental Service Data for 2022, quoted from the Forum Focus Group Discussion activity article).

Tomohon Mayor Regulation Number 30 of 2019 concerning Policies and Strategies of the City of Tomohon in the Management of Household Waste and Similar Types of Household Waste itself is based on Article 7 paragraph (5) of Presidential Regulation Number 97 of 2017 concerning National Policies and Strategies for the Management of Household Waste and Garbage Similar to Household Waste.

In Perwako Tomohon Number 30 of 2019 concerning Policies and Strategies for the City of Tomohon in the Management of Household Waste and Waste Similar to Household Waste in Article 2 paragraph (1) contains (a) the direction of the policy for reducing and handling Household Waste and Waste Similar to Household Waste and (b) strategies, programs and targets for reducing and handling household waste and household waste. With paragraph (2) which states that the time period for implementation is 2018 to 2025.

However, with the presence of Perwako Tomohon Number 30 of 2019 concerning Policies and Strategies for the City of Tomohon in Managing Household Waste and Waste Similar to Household Waste, it has not been successful in dealing with the waste problems at the Taratara final waste processing site. In the second part, article 3 paragraph (3) contains what will be done for handling/managing waste, namely waste sorting, waste collection, waste transportation, waste processing and final waste processing. For this reason, researchers want to examine the reasons why the existence of Perwako Tomohon Number 30 of 2019 has not been successful in dealing with the problem of waste. Is it because the implementation of the policy is wrong (bad implementation) or is the policy that has been made not suitable for dealing with the waste problem (bad policy).

Mantik (2012) stated that the waste problem is related to the weak performance of waste motorbike drivers as well as aspects of punctuality which have an impact on aspects of quantity and effectiveness of work. Apriliani (2021) stated that the report system program still has many obstacles in implementing the program, such as inaccessible disposal areas and a lack of awareness and mentality of the community itself in using the application. Auliani (2020) found that the presence of the Sicanang main waste bank can increase the economic value of the community and raise public awareness and concern for environmentally sound waste management. The difference that differentiates this research from previous studies is that Mantik (2021) examines the performance issues of actors tasked with managing waste, Apriliani (2021) examines how effective government programs are in waste processing, and Auliani (2020) examines how effective government programs are in waste processing. the role of waste banks in the waste management process. Meanwhile, in this research, researchers will examine the policy formulation process which is an effort to address waste management issues. So there is new information because this research focuses more on examining the process of formulating a policy while previous research was not like that.

Methods

This study used qualitative research methods. Collecting data in a natural setting with the aim of interpreting the phenomena that occur (Moleong, 2014; Siyoto and Sodik 2015). Primary data was collected through interviews and observations and secondary data was collected by reviewing documents related to the study topic. Interviews were conducted with elements of leadership and staff at the Tomohon City Regional Environmental Service, Tomohon City DPRD members (who are responsible for formulating this policy), officers responsible for the Taratara Subdistrict TPA and the Community. Data analysis was carried out as part of a series of review, grouping activities, systematization, interpretation and verification of data so that a phenomenon has social, academic and scientific value (Sofian Efendi in Siyoto and Sodik, 2015). The analysis stages are data reduction, data display and conclusion drawing/verification.

Results and Discussion

The research will be carried out at the Tomohon City Regional Environmental Service which is located at Jalan Raya Tomohon-Tondano, Matani Satu Village, Central Tomohon District, Tomohon City, North Sulawesi. And the Tomohon City Waste Final Processing Site is located at Taratara Village, West Tomohon District. The Tomohon City Environmental Service was

formed based on Tomohon City Regional Regulation Number: 6 of 2016 concerning the Organizational Structure and Work Procedures (SOTK) of the Tomohon City Environmental Service and followed up with the Tomohon Mayor Regulation No. 28 of 2016 concerning the Description of the Main Duties and Functions of the Service's Organizational Structure Tomohon City Environment. Waste Management Stages based on Jakstrada (Tomohon Mayor Regulation Number 30 of 2019)

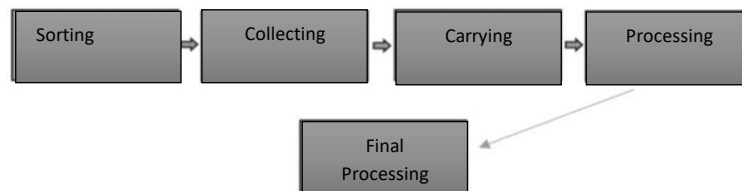


Figure 1. Waste Management Stages based on the Tomohon City Jakstrada (Tomohon Mayor Regulation Number 30 of 2019)

The Tomohon city waste management process carried out by the Tomohon City Environmental Service is based on Jakstrada (Tomohon Mayor Regulation Number 30 of 2019). There are several methods for collecting and final waste management in Indonesia according to the Indonesian National Standard (SNI) 19-2454-2000, namely:

Open Dumping This method is the final disposal method which is considered the simplest because there is no special treatment of waste, and the operation is very easy. The incoming waste is just piled up without any further processing. This can result in environmental pollution, such as air pollution due to odors, water pollution due to leachate, aesthetics, and so on.

Controlled Landfill. In contrast to the open dumping method, the operations used in this method are slightly more complicated and the operational costs are also quite large. This waste management method includes landfilling, leveling and compacting. Once the capacity of the land used to accommodate waste is full, the waste pile is given a covering layer for a predetermined period of time.

Sanitary Landfill. This method is the most complicated method compared to the previous two methods. The costs used are also relatively high, but have a positive impact on the people living around the landfill. In this method, waste is stacked until it reaches a certain thickness, compacted, covered with soil, and compacted again. Next, the waste can be spread again on the top layer of soil, and so on.

The waste management method used at the Taratara Final Processing Site (TPA), was initially designed to use the sanitary landfill method. However, over time the method used changed to the open dumping method. Based on the research data that the researcher found and the researcher has described above, the researcher will discuss the Jakstrada policy formulation process or Tomohon Mayor Regulation Number 30 of 2019 concerning Tomohon City Policy and Strategy in Management of Household Waste and Similar Types of Household Waste. What has been carried out by the Tomohon City Environmental Service in an effort to handle waste problems in Tomohon City is reviewed using the Policy Formulation and Implementation theory (policy formulation and implementation) from Written Material (2003) which includes the stages of problem analysis (problem analysis), development of measures (measurement development), and determination of the impacts (impact determination) are also explained in Subarsono, 2010; Dunn, 1988, Winarno, 2005; Suharso, 2013 and Dwijowojito, 2008)

Problem Analysis (Problem Analysis)

Problem analysis is the initial stage in the policy formulation process according to Material (2003). The main steps in the problem analysis process are goal formulation, current analysis, and deficiency analysis. In the problem analysis stage, the problems that occur are collected then identified, analyzed, and solutions are developed to solve the problem. In connection with the policy formulation process of Tomohon Mayor Regulation Number 30 of 2019 concerning waste management in the city of Tomohon, which is usually called Jakstrada, DLH has stated that the draft or manuscript of the Jakstrada that they prepared was not prepared based on their own ideas but was based on the pocket book for preparing the Jakstrada. Thus, the initial process of policy formulation carried out, namely the problem analysis process, was not carried out by the Tomohon City DLH. The problem analysis process, which should have been carried out involving the community, waste officers, community leaders and the local DPRD with the aim of exploring the waste problems occurring in the community, was not carried out because DLH prepared a draft or text based on the drafting guidebook. jakstrada from the center which is not necessarily suitable or appropriate for the conditions of waste problems that occur in the city of Tomohon.

Basically, problem analysis is a process for breaking down complex substances or problems into smaller parts in order to gain a better understanding. The policy formulation process without the problem analysis stage by the Tomohon City DLH has resulted in a lack of understanding of the waste problems that occur in society so that in its implementation, Perwako Tomohon Number 30 of 2019 was less successful in being absorbed by the community. There is a misunderstanding from the public and the waste processing process that should be carried out to achieve the goals contained in Perwako Number 30 of 2019. The process of problem identification, problem analysis, and solution development as stages in the problem analysis stage is important to properly recognize the problems that occur so that you can understand the root of the problem. By understanding the root of the problem, formulating implemented strategies and policies as well as developing solutions will be easy to obtain and of course in accordance with needs.

Even though DLH has tried to sort and search in the pocketbook for the jakstrada preparation guide regarding strategies and policies that are suitable and in accordance with the conditions existing in the city of Tomohon, without conducting a direct analysis of the problem it is impossible to create truly appropriate solutions to overcome the waste problem that occurs.

As in the city Policy and Strategy Program regarding the Management of Household Waste and Similar Types of Household Waste in the city of Tomohon 2018-2015 in the jakstrada in policy (1), strategy part (a), program b. recycling of household waste and similar household waste as well as programs c. utilization of household waste and similar waste. This activity program is one of the programs selected and contained in the Tomohon city jakstrada regarding waste management. This program was implemented by DLH through the provision of 11 waste banks spread across all sub-districts in Tomohon city. When it was first built and operated, quite a lot of people were active and interested in recycling household waste, thereby reducing the density of waste entering the landfill.

However, over time, the waste bank facilities began to be abandoned and no longer used. The problem that occurs is that people no longer have time to carry out the process of recycling the waste in the waste bank because they have to work to meet their family's living needs. In fact, the process of recycling waste has not succeeded in attracting interest because the profits obtained are not enough. Society is not independent, but rather has other needs that must be met. This is proof that the influence of the problem analysis stage in the policy formulation

process is very important. By skipping this process, the true root of the problem will not be found, which of course results in the development of inappropriate solutions.

Development of Measures (Measurement Development)

In the process of developing these measures, goals and success and policy formulation are measured. The measurement development process includes using data to develop new measurements, update existing measurements, or adapt measurements to new conditions or new settings.

Basically, the stages of the policy formulation process are related and appropriate from one process to another. In this case, the measurement development process must be based on data obtained from the problem analysis process. Incomplete or insufficient depth of the problem analysis carried out will result in the development of measurements not being optimal to obtain appropriate solutions or in accordance with the problems found. In the process of formulating the jakstrada regarding waste management by DLH in the city of Tomohon, even without carrying out in-depth problem analysis research (because they are required to follow the guidebook for preparing the jakstrada from the central government) DLH carried out the measurement development process by looking at several community complaints regarding the issue of standard waste handling costs and The existing waste levy is often protested by the public via social networks. By including the program in policy number (2), strategy part (a), program 2. preparation and review of standard costs for handling household waste and waste similar to household waste, including sorting, collection, transportation, processing and final processing, as well as program 3. preparation of studies and standards for fees for handling household waste and similar types of household waste which includes transportation, processing and final processing.

Capitalizing on information obtained through social networks from the community regarding operational costs and waste handling fees, DLH is considering making it one of the activity programs that is considered suitable for the conditions in the Tomohon city community. However, this is still not enough to overcome the waste problem in Tomohon city. Due to insufficient problem analysis so that the true root of the problem is not found, this results in the development of measurements to formulate appropriate solutions not being optimal.

Determination of the Impacts

Impact predictions are developed from measurements that have been carried out to produce alternative decisions. Stages for analyzing the possible impact of a decision before implementing it. In principle, this impact forecast is to estimate the magnitude of the impact, namely the success of the product or policy that has been formulated in accordance with the objectives of the policy.

Still related to the stages of problem analysis and measurement development, if the previous stages are not fulfilled properly, then the next stages will not work optimally either. In the process of formulating Perwako Tomohon Number 30 of 2019, the Tomohon city DLH is no longer doing this because the programs contained in the guidebook for preparing the jakstrada into the Perwako are already derived from the center and are mandatory for the regions to follow. So that in its implementation to the community there will be no significant impact on waste handling in the city of Tomohon. This stage also includes an evaluation process, which is an assessment of the policy formulation that has been carried out to see the level of success of the policy or the shortcomings of the policy that has been made. This process is a stage of assessing the importance of a program or activity or policy that has been created.

Conclusion

Based on the results of the researcher's research, regarding why the existence of Tomohon Mayor Regulation Number 30 of 2019 concerning Policies and Strategies for the City of Tomohon in the Management of Household Waste and Household Waste has not been successful in overcoming the waste problem in the city of Tomohon regarding the policy formulation process, it is Because: (1) The problem analysis stage is not working because the preparation of Jakstrada or Tomohon Mayor Regulation Number 30 of 2019 only follows directions from the center through the pocket book for the preparation of Jakstrada which is a derivative of Jakstranas so that there is no in-depth research or problem identification process until the root of the problem which results in the activity programs contained in the jakstrada being inappropriate or not suitable for the existing waste problem conditions in the city of Tomohon. (2) The process of developing measures (measurement development) which of course is closely related to the problem analysis stage, the lack of depth in the problem results in not maximally measuring the existing situation or conditions to formulate appropriate policies due to a lack of sufficient or necessary data from the problem analysis stage. (3) The determination of impacts (impact prediction) process was not carried out to predict the level of success of the policies being made, which resulted in problems such as a lack or mismatch of budgets and unsynchronized implementation of policies and society. (4) Budgeting problems were discovered which caused the established policies to not be implemented in accordance with what was determined and required in the waste management process. Programs or activities that are intended to be implemented and carried out as waste management efforts cannot run properly because the existing budget is inappropriate or insufficient for needs. It turns out that budgeting is one of the instruments that determines the success of a policy formulation.

Therefore, it is necessary to carry out the problem analysis stage, to explore and deepen the problems that occur. The policy formulation process cannot be separated from the development of measures stage, in order to maximize the selection or creation of appropriate and appropriate solutions to overcome problems. The stages of determining the impacts (impact prediction) must be carried out, to be able to measure and know the level of success of the policies made. So that it does not become a policy that is a policy failure. To achieve common goals and interests in order to create a healthy living environment free from waste problems that occur. In handling this through making policies and strategies as governing regulations, it is very important to carry out an ideal policy formulation process, following all existing stages. DLH must start from the problem analysis stage so that it can identify in depth and dig down to the real problems that occur in the community in efforts to handle waste so that it can carry out the process of developing appropriate measurements and finding solutions that are suitable and in accordance with the conditions existing in the city. Please and then you can continue with the impact determination stage in which there is an evaluation process to measure the level of success of the policy that has been made so that the policy that has been made does not become a policy failure. Based on findings in the field, aspects of Written Material theory in the policy formulation process are relevant and strong enough to serve as guidelines in the policy formulation process. However, there needs to be an additional aspect or stage to guarantee and strengthen the policy formulation stage, namely, the authority aspect. There needs to be an aspect regarding authority in the policy formulation process. In connection with the jakstrada policy formulation process by the Tomohon City DLH, it is necessary to have authority for the formulation process itself from the Ministry of Environment and Forestry in order to provide opportunities for DLH in the policy formulation process, so that all the stages that should be carried out to create the right policy can be carried out because Each region definitely has

differences in environmental conditions and waste problems, but of course it still refers to the National Jakarta jakstranas and the pocket book on guidelines for preparing the jakstrada.

Based on the aspects or stages of policy formulation from Written Material in the policy formulation process, the actors involved in the policy formulation process must carry out according to the ideal stages in order to create policies that are able to overcome existing problems. Starting from the problem analysis stage, development of measures, then the determination of the impacts stage. However, in order to guarantee and strengthen policy products, the policy formulation process must be supported by a budget that is appropriate to the situation in the field. There needs to be a budgeting/budgeting/budget management process whose function is to plan the budget that will be used in the programs contained in the policy so that it can guarantee the running of the programs without the emergence of budget constraints.

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