



WASTE MANAGEMENT BY THE DEPARTEMENT OF ENVIRONMENT AND SANITATION OF AMBON CITY

PENANGANAN SAMPAH OLEH DINAS LINGKUNGAN HIDUP DAN PERSAMPAHAN KOTA AMBON

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Abstract

This research is a qualitative descriptive study aimed at understanding how the Department of Environment and Sanitation of Ambon City manages waste. The research was conducted at the Department of Environment and Sanitation of Ambon City by collecting primary data through interviews with key informants directly involved in waste management activities in Ambon City. The results of the study revealed that waste management in Ambon City is still carried out conventionally through a series of activities, including the collection, transportation, and disposal of waste. The study also identified seven major challenges faced by the Department of Environment and Sanitation of Ambon City. These challenges include population growth, which continuously produces waste, limited infrastructure, low public awareness about the importance of waste management, issues with border waste between Ambon City and three sub-districts in Central Maluku Regency, and marine waste with 141 potential sources of waste entering the sea, particularly in Ambon Bay. Additionally, the enforcement of waste regulations and management of levies also pose significant challenges. In addressing these various challenges, the Department of Environment and Sanitation of Ambon City collaborates with the private sector through partnership programs.

Keywords: Waste Management, Waste Management Challenges, Private Sector Partnership, Ambon City.

Abstrak

Penelitian ini merupakan penelitian deskriptif kualitatif yang bertujuan untuk memahami bagaimana Dinas Lingkungan Hidup dan Persampahan Kota Ambon menangani masalah sampah di wilayahnya. Penelitian dilakukan di Dinas Lingkungan Hidup dan Persampahan Kota Ambon dengan mengumpulkan data primer melalui wawancara dengan informan kunci yang terlibat langsung dalam kegiatan penanganan sampah di Kota Ambon. Hasil penelitian mengungkapkan bahwa penanganan sampah di Kota Ambon masih dilakukan secara konvensional melalui serangkaian kegiatan yang meliputi pengumpulan, pengangkutan, dan pembuangan sampah. Penelitian ini juga menemukan tujuh kendala utama yang dihadapi oleh Dinas Lingkungan Hidup dan Persampahan Kota Ambon.



Kendala-kendala tersebut meliputi pertumbuhan penduduk yang terus memproduksi sampah, keterbatasan sarana dan prasarana, rendahnya kesadaran masyarakat tentang pentingnya pengelolaan sampah, masalah sampah perbatasan antara wilayah Kota Ambon dan tiga kecamatan di Kabupaten Maluku Tengah, serta masalah sampah laut dengan 141 titik potensial sumber sampah yang masuk ke laut, khususnya di Teluk Ambon. Selain itu, penegakan regulasi persampahan dan pengelolaan retribusi juga menjadi tantangan tersendiri. Dalam menghadapi berbagai kendala tersebut, Dinas Lingkungan Hidup dan Persampahan Kota Ambon bekerja sama dengan pihak swasta melalui program kemitraan.

Kata Kunci: Penanganan Sampah, Kendala Persampahan, Kemitraan Swasta, Kota Ambon.

INTRODUCTION

Every region in Indonesia faces challenges in handling waste, particularly in urban areas where the increasing volume of waste is not matched by optimal management, leaving waste problems unresolved. Population growth and urbanization are key factors in the rise of waste generated by society, where every activity produces waste but is not accompanied by environmentally friendly waste processing (Darmawati, 2019). This aligns with the World Health Organization's (WHO) definition of waste, which is something unused, unwanted, or discarded that originates from human activities and does not occur naturally. It can be concluded that the increase in waste volume is closely related to human activities. The National Standardization Agency, in the Indonesian National Standard (SNI) 19-2454-2002 on Technical Guidelines for Urban Waste Management, explains that waste is solid waste from organic and inorganic materials considered no longer useful and must be managed to avoid harming the environment and protect development investments (Riswan et al., 2011). From this definition, it is emphasized that waste is essentially discarded material but must go through environmentally friendly management processes to prevent harm to the environment, humans, and other biodiversity.

The amount of waste generated by the community per capita per day, measured in volume or weight, is referred to as waste generation (Farfar, 2018). Therefore, waste management issues require sustainable management and the involvement of all parties, including the government, community, and private sector, to address these issues. Sustainable waste management requires policies that provide legal certainty binding individuals and groups to be responsible for the waste they produce (Orbawati & Ahsani, 2019). Policy formulation is the government's responsibility as the administrator of a region and as the entity with the authority to regulate all civic activities (Cahyani et al., 2021). According to Dunn (Riswan et al., 2011), public policy is essentially the government's choice of actions allocated to the entire community, making the policy binding, with specific goals and always oriented towards fulfilling public interests.

The legal foundation for waste management in Indonesia is regulated under Law No. 18 of 2008 on Waste Management. It explains that household waste management activities and similar waste include waste reduction and waste handling activities (Indonesia, 2008). Waste reduction efforts aim to reduce excessive waste production through activities such as limiting waste production, recycling waste, and reusing waste. Meanwhile, waste handling involves managing waste to minimize its negative impacts through activities that include waste collection, sorting, transportation, processing, and final disposal (Subekti, 2010).

As the capital of Maluku Province, Ambon City is surrounded by the sea and mountains, making waste management a challenge currently being addressed. The dynamics of waste management in Ambon City are significantly influenced by economic growth, consumption patterns, limited infrastructure, and public awareness (Umar, 2018). The Department of Environment and Sanitation of Ambon City, as a government organization responsible for waste management activities, is tasked with formulating



policies, overseeing implementation, and executing technical policies in the field of environmental and waste management, as well as administering the department according to the Mayor of Ambon's directives. The Department plays a crucial role in sustainable waste management through effective waste handling, not only in policy formulation but also in the provision of infrastructure and encouraging public involvement in waste management.

Ambon City is one of the major cities that undoubtedly faces complex waste management issues. Amid urban development, serious problems have arisen related to the increasing amount of waste generated. Waste generation refers to the amount of waste produced by the community per capita per day, measured in volume or weight, as defined in SNI 19-2454-2002. This phenomenon is increasingly evident with the rising volume of waste from daily activities, both from households and industries. According to data from the Ambon City Central Statistics Agency, through the publication of "Ambon City in Figures 2023," it is estimated that in 2022, Ambon City produced 196m³ of waste per day, while the volume of waste transported to the Final Disposal Site (TPA) was 179.1m³ per day (Umar, 2018).

The waste problem has extended to the marine areas, threatening the sustainability of marine ecosystems and marine life. Based on a survey conducted by the Department of Environment and Sanitation of Ambon City, 141 potential waste sources (such as drains, rivers, and streams) contribute to waste in Ambon Bay. This situation is exacerbated by the low level of public participation, habitual littering, and lack of education about recycling and waste management. Inadequate infrastructure to support optimal waste management remains a challenge for the Department in handling waste (Runtuwuu, 2020). Many areas lack adequate waste facilities, such as Temporary Disposal Sites (TPS), and waste collection services do not reach some areas due to the absence of access roads, leading to waste accumulation in open spaces or illegal dumping, creating unpleasant and unhealthy conditions.

Another waste issue is border waste. Administratively, Ambon City borders three sub-districts in Central Maluku Regency that are not yet served by waste facilities, leading to illegal dumping sites worsening the waste situation in those areas. Controlled waste management requires the enforcement of regulations, which is a crucial factor often overlooked. The lack of law enforcement for violations related to improper waste disposal continues to perpetuate behaviors that violate waste management rules. Currently, regulation enforcement has not been maximized, and this is one of the problems faced by Ambon City in tackling waste issues. Inadequate regulation enforcement also affects the collection of waste levies to increase Regional Original Revenue (PAD). Waste management requires significant funding, reducing the budget allocation for other waste-related development programs and public services.

The Department of Environment and Sanitation of Ambon City, in implementing effective waste management, strives through routine waste collection by officers at each TPS according to the Standard Operating Procedures (SOP) set by the Department. This effort aims to prevent waste accumulation outside the waste collection schedule, thereby not disrupting community activities. Facilities supporting the waste management process in Ambon City include communal TPS in the community, although limited, available waste transport that operates daily, and a landfill located in Toisapu Village as the final processing site. Despite the efforts made by the Department and the availability of regulations and facilities, waste remains a social issue requiring continuous management by the Ambon City Government and the Department of Environment and Sanitation.

In this context, research on "Waste Management by the Department of Environment and Sanitation of Ambon City" becomes crucial. This research will provide insights into the challenges, policies, programs, and practices undertaken by the Department. The



findings of this research are expected to offer recommendations to stakeholders in optimizing waste management efforts.

METHODS

This research is a qualitative study with a descriptive approach, meaning that it describes the condition of the subjects and objects of the research, including individuals, institutions, communities, and others, based on the results of observations and in-depth interviews. It provides opinions on the findings in the field and relates them to the conceptual framework and relevant laws associated with the issues being studied.

The research subjects are the scope that serves as the source of information and data observed in this study. The subject of this research is the Department of Environment and Sanitation of Ambon City. The research object is the issue to be studied by the author, which is the waste management conducted by the Department of Environment and Sanitation of Ambon City.

The instrument for this research is the researcher themselves, who sets the research focus, selects informants, collects data, and assesses the quality of the research object by analyzing data, interpreting it, and drawing conclusions. Data collection techniques include direct interviews, observation, and documentation. According to (Pasolong, 2020), direct interviews involve a two-way conversation conducted by the interviewer with respondents or informants to gather information relevant to the research objectives. (Pasolong, 2020) also stated that observation is a systematic direct observation of the phenomena to be studied. Observation is used to collect information by directly observing the research subjects and objects to obtain valid data corresponding to field conditions. Documentation can take the form of photos, books, or other important documents containing information about the research object. In qualitative research, documentation is very useful for providing information on events that occurred in the past.

In qualitative research, the determination of informants is key to the success of the interview process. According to Moleong, research informants are people used to provide information about the research background's situation and conditions. In this study, the author categorized the research informants into seven groups: the Head of the Department of Environment and Sanitation of Ambon City as the key informant. The supporting informants include the Head of the Environmental Management Division of the Department, Staff of the Integrated Waste Management Installation (IPST), Waste Collection Officers, the Community, Third-Party Waste Management (Waste Banks), and Waste Collectors.

The data sources in this research are divided into two categories: Primary Data and Secondary Data. According to (Pasolong, 2020), Primary Data is data obtained directly by the data collector (researcher). In contrast, Secondary Data refers to all data obtained indirectly from the research object.

In conducting data analysis, the author follows a concurrent activity flow. According to Miles and Huberman, there are three techniques for data analysis in qualitative research, as follows:

1. Data Reduction

This form of analysis involves sorting, categorizing, directing, discarding unnecessary information, and organizing the data in such a way that final conclusions can be drawn.

2. Data Display

This activity involves organizing a collection of information in a way that allows for conclusion drawing. Forms of qualitative data presentation include narrative texts (in the form of field notes), matrices, graphs, networks, and charts.

3. Conclusion Drawing

This is the result of the analysis that can be used to take action.



RESULTS AND DISCUSSION

Results

Waste Management by the Department of Environment and Sanitation of Ambon City

Based on data collected through interviews, observations, and documentation, the following is a summary of the research findings on waste management by the Department of Environment and Sanitation of Ambon City. Waste management aims to handle waste starting from its generation at the source until it ends up in the final processing site, which must be done properly. Proper waste disposal and efficient waste processing are achieved through a series of activities that include systematic, planned, and organized aspects of waste collection, transfer, processing, recycling, and final disposal, thereby creating a clean, healthy, and sustainable environment. These aspects of waste management will be the focus of this research.

Waste management in Ambon City is directly managed (self-managed) by the Department of Environment and Sanitation of Ambon City using a conventional waste management system, which involves the activities of collecting, transporting, and disposing of waste. For optimal waste management, the Department of Environment and Sanitation of Ambon City requires support from various parties; therefore, the department involves partnerships in tackling waste issues.

Collection

Waste collection is carried out by waste producers, whether from the community or industrial sectors. In terms of collection, the Department of Environment and Sanitation of Ambon City provides facilities such as communal TPS (Temporary Disposal Sites) scattered throughout residential areas. However, based on research findings through interviews and field observations, waste collection is hampered by the limited capacity of communal containers, which are insufficient to accommodate the amount of waste generated by the community. The limited capacity of communal containers is exacerbated by the low participation of the community in adhering to the rules regarding the timing of waste disposal at communal TPS. It was also found that the waste collection process by waste producers is assisted by waste carts, due to the absence of TPS in the community. The waste cart service is not directed by the Department of Environment and Sanitation of Ambon City. However, the presence of these waste carts can help the department in the aspect of waste collection, especially for residential areas that do not have communal TPS and waste transportation services. The challenge is that the timing of waste disposal from the carts to the communal TPS does not align with government guidelines, which stipulate waste disposal times between 22:00 WIT and 05:00 WIT. This mismatch affects the amount of waste transported to the TPA (Final Disposal Site) and leads to waste accumulation outside the designated disposal hours.

Sorting

Sorting waste is the responsibility of all waste producers, as different types of waste require different handling methods based on their characteristics. However, the research findings indicate that most waste in Ambon City does not undergo any sorting process. This issue primarily stems from limited infrastructure for waste sorting, which hinders effective waste management. Additionally, there is a low level of public awareness and participation in waste sorting, further exacerbating the problem. Without adequate facilities and proper education on the importance of waste sorting, many residents are not engaged in this crucial step of waste management. Consequently, waste that could potentially be recycled or processed is instead mixed with other waste types, making it more difficult to manage and increasing the burden on disposal sites. Improving infrastructure and raising public awareness are essential steps to address this issue, ensuring that waste is sorted effectively to facilitate better waste management and environmental sustainability in Ambon City.

Transportation

Waste transportation from communal collection points is carried out in accordance with the SOP established by the Department of Environment and Sanitation of Ambon City



to organize field officers in task distribution and waste transportation routes. This research also found that the department provides waste transportation services based on an MoU (Memorandum of Understanding). The MoU-based waste transportation is a collaboration between the department and private parties that produce large amounts of waste, which cannot be accommodated at the TPS. MoU-based transportation is also one of the department's efforts to increase regional income from waste management.

Processing

Waste processing aims to reduce the volume of waste ending up in the final processing site by altering the characteristics of the waste, utilizing it as raw material for composting or recycling.

Waste processing from communal TPS to the TPA is currently managed by partner companies in collaboration with the Department of Environment and Sanitation of Ambon City, namely PT. Million Limbah Ambon and MVO Nederland Sweep Smart, under the Plastic in Circle (PiCi) program. These partner companies are facilitated by the department with land in the TPA zone located in Toisapu. The volume of waste managed by these partner companies is reported to the department through the Integrated Waste Management Installation (IPST) as the manager of the final processing site. According to data and information obtained through interviews, waste management was previously conducted by IPST, where waste was processed into compost. However, starting in 2023, waste processing has been taken over by partner companies.



Figure 1. Map of the Zoning of the Toisapu Final Processing Site (IPST)

The partnership established by the Department of Environment and Sanitation of Ambon City is one of the efforts to achieve optimal waste management. Through PT. Million Limbah Ambon, a plastic waste recycling plant that converts plastic waste into raw materials, specifically plastic pellets. The Plastic in Circle (PiCi) initiative is a realization of the collaboration between the Ambon City Government and MVO Netherlands. This partnership has also provided the Department of Environment and Sanitation of Ambon City with various facilities, including 1 TPS3R unit, 5 waste collection points, and 1 compactor truck.





Figure 2. Waste Processing Location by Partner Companies



Figure 3. Waste Collection Point

Final Processing

The final processing site is the last stage in waste management. The final processing site in Ambon City is located in Toisapu Village, covering an area of 7 hectares and equipped with a weighbridge. The weighbridge is used to measure the volume of waste entering the final processing site daily. The waste amount is recorded by IPST staff and then reported to the Department of Environment and Sanitation of Ambon City.

Currently, the final processing site uses an open dumping system. According to interviews with the Head of the Department of Environment and Sanitation of Ambon City, the Toisapu TPA was previously managed using a controlled landfill system, but it was changed to an open dumping system due to the spread of the COVID-19 pandemic in Ambon City. Field observations reveal that the Toisapu TPA is currently facing challenges due to a lack of heavy equipment needed to process the waste accumulated on the site. As a result, the waste is simply piled up. According to information from IPST staff, a request for heavy equipment is being processed.



Figure 4. Waste Piles at Toisapu TPA

The perception of the TPA is often misunderstood. A TPA is not merely a final disposal site but a final processing site, meaning the waste dumped at the TPA needs further processing to avoid environmental contamination. Therefore, the Department of



Environment and Sanitation of Ambon City must urgently address the issue of the open dumping system by procuring heavy equipment to manage the waste at the TPA. The open dumping system is no longer recommended for waste management at final processing sites due to its environmental risks.

According to data obtained from the archives of the Department of Environment and Sanitation of Ambon City on the amount of waste entering the TPA, as recorded by the weighbridge, the amount of waste entering the final processing site up to September 2023 reached 50,897 tons. The management of inorganic waste is also noted, with PT. MLA processing 165 tons of waste and 62 tons managed through the PiCi program at TPS3R from July to September 2023. This data indicates that the waste management by partner companies successfully reduced plastic waste by 1.36%, as detailed in the following table:

Table 1
Waste Data Entering the TPA in 2023

Month	Amount of Waste Weighed at the Weighbridge (TON)	Waste Sorted by Private Sector (TON)		Total Waste Entering TPA (TON)
		PT. MLA	PiCi TPS3R	
January	5.698,0	0	0	5.698,0
February	5.176,0	0	0	5.176,0
March	5.754,0	0	0	5.754,0
April	6.165,0	0	0	6.165,0
May	5.863,0	0	0	5.863,0
June	5.747,0	0	0	5.747,0
July	5.629,0	76,93	25,273	5.526,0
August	5.655,0	55,161	24,378	5.576,0
September	5.438,0	33,18	13,084	5.392,0

Source: Archives of the Department of Environment and Sanitation of Ambon City, 2024.

At the final processing site, waste pickers often use the waste dumped by waste transport vehicles at the TPA as a source of livelihood. These waste pickers collect waste with economic value, such as plastic, cardboard, and aluminum. Additionally, they gather organic waste to use as animal feed. On average, they collect about 20 kilograms of plastic waste daily. To obtain higher prices, the collected waste is sorted by type before being sold to recyclers. The residual waste from the sorting process is returned to the TPA.

Challenges in Waste Management by the Department of Environment and Sanitation of Ambon City

The unresolved waste issues in Ambon City remain a significant challenge that the Department of Environment and Sanitation of Ambon City continues to address. Interviews with the department's head reveal that waste management in Ambon City is highly complex, involving regulatory, financial, and community participation aspects. This complexity contributes to the increasing volume of waste generated annually. The growing waste volume is largely driven by population growth and the activities associated with it. The waste volume will continue to rise as Ambon's population grows, further exacerbated by high population migration due to Ambon's status as the center of activities in Maluku Province, along with low public awareness and limited infrastructure. Low public awareness of proper waste disposal times hampers optimal waste collection.

Another challenge faced by the Department of Environment and Sanitation of Ambon City is related to waste collection fees. These fees are crucial for funding waste management optimization in Ambon City. However, waste management in Ambon City remains a social issue requiring the involvement of all stakeholders, including the government, community, and private sector, and the need for binding regulations to govern all aspects of waste management. It has been found that the enforcement of waste management regulations in Ambon City is still ineffective, posing another challenge for



the department. This is further evidenced by the waste ending up in the sea, particularly in Ambon Bay. According to a survey conducted by the department, 141 locations have been identified as potential sources of waste flowing into the sea, particularly in Ambon Bay, and at the borders between Ambon City and three sub-districts in Central Maluku Regency.

Discussion

Based on the analysis of data and information obtained through the research, it is evident that waste management by the Department of Environment and Sanitation of Ambon City has not been carried out optimally. This is apparent across various activities, including waste collection, sorting, transportation, processing, and final disposal.

In the dimensions of waste collection and sorting, the process is hindered by the limited infrastructure and facilities necessary to support effective waste sorting. This issue is compounded by the conventional waste management system currently in place. The suboptimal nature of waste collection and sorting is further influenced by the low level of public awareness and participation in waste management. Despite these challenges, waste transportation is carried out according to the Standard Operating Procedures (SOP) established by the Department of Environment and Sanitation of Ambon City.

Waste processing, aimed at reducing the volume of waste entering the TPA (Final Disposal Site), is managed by partner companies in collaboration with the Department, particularly in the area of plastic waste processing. However, the final waste processing at the Toisapu TPA currently operates under an open dumping system. This open dumping system represents a significant issue in Ambon's waste management that has not yet been adequately addressed by the Department. The final processing at the Toisapu TPA faces challenges due to the lack of heavy equipment, necessitating the procurement of such equipment to properly process the waste accumulated at the site, thereby preventing environmental contamination.

The suboptimal waste management by the Department of Environment and Sanitation of Ambon City is further evidenced by the complexity of waste-related issues, including regulatory, financial, and community participation aspects. The regulatory framework for waste management in Ambon City is still not effectively enforced, which contributes to the ongoing challenges in waste management. Financial constraints also play a significant role, as adequate funding is crucial for the successful implementation of waste management programs.

Additionally, the low level of community involvement exacerbates the problem, as public participation is essential for effective waste management. Without sufficient public awareness and engagement, efforts to improve waste management practices are likely to be less effective. To address these challenges, it is critical for the Department to enhance its regulatory enforcement, secure the necessary financial resources, and foster greater community participation in waste management efforts. This comprehensive approach is essential for improving waste management in Ambon City and ensuring a cleaner, healthier environment for its residents.

CONCLUSION

Conclusion

Based on the research findings from the discussion on waste management by the Department of Environment and Sanitation of Ambon City, it is evident that waste management has not been maximized. The following are some key conclusions:

1. Waste management is directly handled by the Department of Environment and Sanitation of Ambon City, with support from partnerships with governmental agencies, private sectors, and community involvement. The waste management system in Ambon City is conducted conventionally through a series of activities involving collection, transportation, and disposal.



2. According to Law No. 18 of 2008 on Waste Management, as detailed in Ambon City Regulation No. 11 of 2015 on Waste Management, waste handling must include a series of activities such as collection, sorting, transportation, processing, and final disposal.
3. Based on interviews with community members involved in waste collection from sources to TPS (Temporary Disposal Sites), two collection patterns were identified: indirect transportation and communal indirect transportation.
4. Sorting at the source is not conducted, which contributes to the continued use of conventional waste management methods. The lack of sorting at the source is due to conventional containment, limited facilities, and low public awareness about waste sorting.
5. Waste transportation is carried out by personnel assigned by the Department of Environment and Sanitation of Ambon City, following the SOP for waste transportation set by the department. Waste is weighed at a weighbridge located in one of the TPA zones before being dumped at the final disposal site, and the weighbridge data is recorded by IPST staff for reporting to the department.
6. Waste management at the TPA is handled by partner companies (PT. MLA and TPS3R Landfill) and supervised by IPST. The managed waste is reported to the Department of Environment and Sanitation of Ambon City. According to the research, approximately 227 tons of waste were managed in the first three months.
7. The final processing site currently uses an open dumping system. Previously, the Toisapu TPA was managed using a controlled landfill system but switched to open dumping due to the COVID-19 outbreak in Ambon City. The lack of heavy equipment hinders the processing of waste at the TPA, resulting in waste being simply piled up.
8. Ambon City faces complex waste management challenges, including regulatory, financial, and community participation issues. These complexities contribute to the increasing waste volume each year. Seven major challenges were identified, including population growth, inadequate infrastructure, low public awareness, border waste between Ambon City and three sub-districts in Central Maluku Regency, marine waste with 141 potential sources of waste entering the sea, particularly Ambon Bay, waste regulation enforcement, and collection fees.
9. Support from the private sector through partnerships must be optimized to tackle waste issues, especially plastic waste. The private sector's role in addressing plastic waste should be leveraged to motivate the community to manage waste effectively.
10. The Department of Environment and Sanitation of Ambon City also receives support from environmentally conscious community groups, which can be utilized as an extension to educate the public on waste management.

Recommendations

The recommendations that the researcher can provide based on the findings of the study on Waste Management by the Department of Environment and Sanitation of Ambon City are as follows:

1. Waste management in Ambon City should begin with sorting at the source to reduce the burden on the TPA. Changing public habits requires consistent education and socialization through various media to encourage waste sorting. Educating the public on sorting waste into three types—organic, non-organic, and residual—is essential. The Department of Environment and Sanitation of Ambon City can collaborate with waste management communities to influence public behavior.
2. There needs to be a firm regulation that governs waste management activities in Ambon City, followed by strict enforcement of these regulations.



3. Address the TPA system issues by procuring the necessary heavy equipment to ensure that waste entering the final processing site is properly managed.
4. Collaborate with villages or local governments to tackle marine, border, and roadside waste, aiming for 100% waste management. This collaboration could involve policy formulation or practical actions like regular and consistent environmental cleanups, supported by the Department of Environment and Sanitation of Ambon City with the necessary infrastructure and facilities.

REFERENCES

- Cahyani, P. D., Adys, A. K., & Abdi, A. (2021). Kinerja Dinas Lingkungan Hidup Dalam Pengelolaan Sampah Di Kabupaten Gowa. *Kajian Ilmiah Mahasiswa Administrasi Publik (Kimap)*, 2(5), 1595–1614.
- Darmawati, D. (2019). *Kebijakan Pengelolaan Persampahan Kota Palopo (Studi Badan Lingkungan Hidup)*.
- Farfar, R. (2018). Strategi Dinas Lingkungan Hidup Dan Persampahan Dalam Pengelolaan Sampah Pesisir Di Kota Ambon Provinsi Maluku. *Jurnal Ilmiah Administrasi Pemerintahan Daerah*, 10(2), 68–78.
- Indonesia, P. R. (2008). *Undang-Undang Republik Indonesia Nomor 18 Tahun 2008 Tentang Pengelolaan Sampah*.
- Orbawati, E. B., & Ahsani, R. D. P. (2019). Responsivitas Dinas Lingkungan Hidup Dalam Pelayanan Persampahan Di Kota Magelang. *Jurnal Ilmu Administrasi Negara Asian (Asosiasi Ilmuwan Administrasi Negara)*, 7(1), 34–46.
- Pasolong, H. (2020). *Metode Penelitian Administrasi Publik*. Penerbit Alfabeta.
- Riswan, R., Sunoko, H. R., & Hadiyanto, A. (2011). Pengelolaan Sampah Rumah Tangga Di Kecamatan Daha Selatan. *Jurnal Ilmu Lingkungan*, 9(1), 31–38.
- Runtuwu, P. C. H. (2020). *Kajian Sistem Pengolahan Sampah*. Ahlimedia Book.
- Subekti, S. (2010). Pengelolaan Sampah Rumah Tangga 3r Berbasis Masyarakat. *Prosiding Sains Nasional Dan Teknologi*, 1(1).
- Umar, N. (2018). Efektifitas Pelaksanaan Peraturan Daerah Kota Ambon Nomor 11 Tahun 2015 Tentang Pengelolaan Sampah Dalam Memberikan Akses Pelayanan Sampah Di Batumerah Atas. *Fikratuna: Jurnal Pendidikan & Pemikiran Islam*, 9(1).

