

An Analysis of Solid Waste Management Model: Basis for Sustainable Waste Management

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Abstract: Managing solid waste is now one of the biggest challenges communities face as they work toward sustainable development. This study examined the effectiveness of the current solid waste management (SWM) in Passi City, Iloilo, and offered insights to help develop a more sustainable model. It looked at the roles of waste collection, segregation, recycling, composting, and community participation in supporting environmental sustainability. To gather information, the study used a survey questionnaire for key stakeholders directly involved in waste management. The 100 respondents included 25 staff from the Passi City Waste Management Office, 50 barangay officials and functionaries, and 25 household representatives. An adapted questionnaire from the provisions of Republic Act No. 9003 and aligned with international solid waste management frameworks was used. The data were analyzed using frequency and percentage, weighted mean, standard deviation, and ranking. The findings show that, although some best practices are already in place, challenges remain, especially in public awareness, consistent waste segregation, access to recycling and composting facilities, and enforcement of relevant policies. The study, therefore, recommends strategies to improve sustainable waste management, including strengthening environmental education programs, expanding waste processing facilities, encouraging active community participation, and ensuring strict enforcement of existing laws.

Keywords: Sustainable waste management, efficiency, Solid Waste Management Model, Passi City, Iloilo, Philippines

INTRODUCTION

Background of the Study

The increasing volume of solid waste has become a major environmental concern in the Philippines, particularly in rapidly urbanizing communities where improper waste disposal contributes to pollution, flooding, health risks, and environmental degradation. Despite the enactment of Republic Act No. 9003, many local government units (LGUs) continue to struggle with waste segregation, collection, recycling, and disposal practices.

Recent studies revealed that waste management systems in many Philippine communities remain inefficient, outdated, and inconsistently implemented due to limited infrastructure, inadequate funding, and weak community participation (Abubakar et al., 2025). Furthermore, studies conducted in various localities in the Philippines found recurring issues such as poor compliance with waste segregation policies, insufficient material recovery facilities (MRFs), and low public awareness regarding sustainable waste management practices (Catiil, 2025).

In the local context, many municipalities and barangays continue to experience improper waste disposal practices, including open dumping, waste burning, and irregular collection systems. Although some LGUs have initiated waste reduction and recycling programs, implementation gaps remain evident in policy enforcement, monitoring, and stakeholder participation. Research in schools and communities also revealed that limited environmental education, lack of discipline, and insufficient coordination among stakeholders hinder the effective implementation of sustainable waste management programs (Camarillo & Bellotindos, 2021). These realities

indicate that existing waste management models are not fully responsive to the increasing environmental demands of communities.

The gaps in existing studies lie in the limited analysis of comprehensive solid waste management models that integrate policy implementation, community participation, sustainability principles, and long-term development strategies. Most studies focused only on assessing compliance with Republic Act No. 9003 or evaluating specific waste management practices without proposing an adaptive and sustainable waste management development framework (Andaya et al., 2025). Moreover, there remains insufficient localized analysis on how current waste management models can be improved to align with sustainable development goals and circular economy principles.

The ideal situation is anchored on the legal and philosophical foundations of sustainable environmental governance. Republic Act No. 9003 (2001) mandates waste reduction, segregation at source, recycling, composting, and the establishment of environmentally sound waste disposal systems. Likewise, Republic Act No. 11898 (2022), strengthens waste accountability and promotes circular economy initiatives. The study is also anchored on the philosophy of environmental stewardship, which emphasizes the collective responsibility of individuals, institutions, and governments in preserving the environment for future generations. Sustainable development theory further supports the need to balance environmental protection, economic growth, and social responsibility.

This study sought to address these gaps by analyzing existing waste management models and identifying sustainable strategies that may enhance policy implementation, community participation, and environmental sustainability. Moreover, the study supports the attainment of the United Nations Sustainable Development Goals, particularly United Nations Sustainable Development Goal 11 on sustainable cities and communities and Sustainable Development Goal 12 on responsible consumption and production. By promoting effective waste management systems and sustainable environmental practices, the study contributes to cleaner communities, environmental protection, and sustainable resource utilization.

Anchored on the principles of the Sustainable Development Theory, Systems Theory, and the Theory of Environmental Stewardship, this study aimed to evaluate the efficiency of the sustainable Solid Waste Management (SWM) model used by LGUs in the Province of Iloilo. Specifically, the study sought to answer the following questions: (1) What is the current structure and operational framework of the sustainable solid waste management model being implemented, with respect to the segregation system, collection system, recycling program, composting process, and disposal method? (2) What is the level of efficiency of the Solid Waste Management Model in the Province of Iloilo? (3) How do respondents perceive the efficiency of the existing SWM system as it is currently implemented? and (4) What sustainable SWM can be proposed based on the results of the study?

METHODOLOGY

The general objective of the study was to analyze the existing Solid Waste Management (SWM) model and determine its effectiveness as a basis for sustainable waste management development. Specifically, the study aimed to assess the efficiency of the current SWM practices in terms of environmental cleanliness, waste reduction, resource utilization, public health and sanitation, and community participation. Furthermore, the study sought to identify the strengths, challenges, and areas for improvement in the implementation of solid waste management programs to formulate sustainable strategies and recommendations that may enhance ecological solid waste management practices and environmental sustainability.

The study employed a qualitative research design utilizing a descriptive approach to comprehensively analyze the existing solid waste management model and its implementation. Purposive sampling was used in selecting the participants based on their knowledge, expertise, and direct involvement in solid waste management activities. The participants included barangay officials, environmental coordinators, waste management personnel, and community stakeholders who were capable of providing relevant and reliable information regarding the implementation and sustainability of the SWM program.

Data were gathered through surveys, observations, and document analysis to obtain in-depth information about waste management practices, operational efficiency, implementation challenges, and sustainable development initiatives. Prior to data collection, ethical considerations such as informed consent, voluntary participation, confidentiality, and anonymity were strictly observed. The collected data were carefully organized, analyzed, and interpreted according to the objectives of the study to generate findings, conclusions, and recommendations relevant to sustainable waste management development.

RESULTS AND DISCUSSION

Current Structure and Operational Framework of the Sustainable Solid Waste Management Model

Segregation System

In the city of Passi, the waste-segregation system demonstrates that waste is properly separated at the source into biodegradable, recyclable, and residual categories. This reflects strong compliance with waste segregation policies. Additionally, all sectors of the community are being affected by source reduction efforts, with residents beginning to sell their recyclables to ambulant junk buyers out of their recovered waste.

Collection System

Regarding the collection system, the waste collection is carried out regularly and efficiently, with proper schedules and minimal delays, contributing to the maintenance of a clean city. The operation was through the City Waste Management Office under the Office of the Mayor that collects the City residual wastes which market wastes are collected daily. Moreover, strategic barangays are provided with five (5) Waste Collection Trucks for their waste collection wherein CWMO uses four (4) dump trucks with a 3 tons capacity and two (2) compactor trucks with 6-8 tons capacity for waste collection in urban areas. Additionally, collection team of the City is composed of twenty (20) collectors and eight (8) drivers to ensure the efficient collection of waste which is done twice daily (two trips per day for the market waste and two trips daily from the residential area and commercial districts including institutions, service centers and other waste sources outside the market. Moreover, the collection within the city is 6 days a week, (6AM to 11AM) and (1PM to 4PM) with disposal to Passi City Sanitary Landfill Facility of an average of seven (7) trips per day.

Recycling Program

The recycling program of Passi City is also considered as highly effective, demonstrating proactive efforts such as materials recovery facilities (MRFs), community participation, and reuse practices that reduce waste. The City identified five (5) operational junkshops within the city. Households who been practicing waste segregation sold their own recyclables in the ambulant junk buyers. At present, Passi City is in partnership with PH Plastic Circularity Project of United Nations Development Programme (UNDP), promoting Circular Economy through recycling and Social and Behavior Change Communications (SBCC) on proper solid waste management.

Composting Process

The city's composting activities are in the MRF in Barangay Poblacion Ilawod. The composting facility occupies a land area of 800 sq. m. with an active working area of 70 sq m. The facility is equipped with a 2.5 HP shredder and a mixer and employs two (2) workers for the operation. Only the green waste from the main market is being processed in the MRF. The daily input of biodegradable waste averages 200 kg/day, yielding about 100 kg/day of compost. The facility utilizes vermiculture composting. Hence, considering the limited capacity of the composting facility, the MRF in Poblacion Ilawod can only be considered as a demonstration project. Furthermore, the City is one of the recipients of SWM Equipment from the DENR EMB Region VI Office consisting of bio-shredder and bio-composter. This equipment helps the LGU in their composting activity and to divert the collected biowastes into soil enhancers.

Disposal Method

The disposal method of Passi City was strengthened with a Public-Private Partnership (PPP) with Basic Environment Systems and Technologies (BEST), Inc., under the IPM Group of Companies. Thus, disposal is carried out in an environmentally sound manner ensuring minimal environmental impact through the continuous disposal of residual wastes to Sanitary Landfill Facility by Passi City and under LGUS from the Province of Iloilo and Province of Capiz. Table 1 shows the list of LGUs disposing to Passi City Integrated Waste Management Facility; 46 (36 from Province of Iloilo; 10 from Province of Capiz).

Table 1. List of LGUs Disposing to Passi City Integrated Waste Management Facility

Municipality	Province	Municipality	Province
Ajuy	Iloilo	Leon	Iloilo
Alimodian	Iloilo	Mina	Iloilo
Anilao	Iloilo	New Lucena	Iloilo
Badiangan	Iloilo	Passi City	Iloilo
Banate	Iloilo	Pavia	Iloilo
Barotac Nuevo	Iloilo	Pototan	Iloilo
Barotac Viejo	Iloilo	San Enrique	Iloilo
Batad	Iloilo	San Miguel	Iloilo
Bingawan	Iloilo	San Rafael	Iloilo
Cabatuan	Iloilo	Sara	Iloilo
Calinog	Iloilo	Sigma	Capiz
Concepcion	Iloilo	Sta. Barbara	Iloilo
Cuartero	Capiz	Tigbauan	Iloilo
Dao	Capiz	Tubungan	Iloilo
Dingle	Iloilo	Zarraga	Iloilo
Dueñas	Iloilo	Panit-an	Capiz
Dumangas	Iloilo	Ivisan	Capiz
Dumarao	Capiz	Estancia	Iloilo
Guimbal	Iloilo	Dumalag	Capiz
Igbaras	Iloilo	Maayon	Capiz
Jamindan	Capiz	Sapian	Capiz
Janiuay	Iloilo		
Leganes	Iloilo		
Lemery	Iloilo		

Level of Efficiency of the Solid Waste Management Model in the Province of Iloilo

Table 2 presents the level of efficiency of the solid waste management model. The results show that the current structure and operational framework of SWM are well-established wherein practices such as waste segregation at source, regular waste collection, and information, education and communication campaigns are consistently implemented. Furthermore, facilities such as Materials Recovery Facilities (MRFs) are present, although not fully maximized in all areas. Also, community participation in activities such as composting and recycling is not consistent. While in the terms of the efficiency, the waste management system is generally rated as efficient to very efficient indicating that waste collection services are reliable, and efforts to reduce waste through recycling and composting are evident. Despite this, there are minor concerns regarding the optimal use of resources, budget allocation, and facility utilization.

Thus, the results show that the SWM system operates effectively, yet there are opportunities to improve its efficiency and sustainability over time. These findings align with Republic Act No. 9003, which highlights the significance of effective collection and disposal, careful resource management, redirection via recycling and composting, and enhancements to facilities such as Materials Recovery Facilities (MRFs). Furthermore, the results support the study of World Bank (2018), highlighting that effective waste management systems in developing

countries often perform well in terms of waste collection services but face challenges in financial sustainability and resource optimization. This explains why service delivery rates in the study scored higher than cost efficiency and facility utilization.

Similarly, United Nations Environment Programme (2015) emphasizes that while many local governments are able to establish functional waste collection systems, achieving long-term sustainability requires improving resource efficiency, increasing recycling efforts, and maximizing the use of waste management infrastructure. This supports the study’s conclusion that although the SWM system is functioning effectively, there is still room for improvement in terms of resource management and facility utilization.

Additionally, a study by Guerrero et al. (2013) confirm that while waste collection is often the most developed element of waste management systems in developing countries, recycling efficiency and financial management remain persistent challenges. Similarly, Wilson et al. (2012) highlight that an integrated sustainable waste management system must combine collection efficiency with resource recovery and institutional capacity, thereby reinforcing the need for continuous system improvement.

Table 2. Level of Efficiency of the Solid Waste Model

Statement	Mean	SD	Interpretation
Overall Level of Efficiency	4.35	0.730	Efficient
1. The SWM program uses resources efficiently.	4.30	0.969	Efficient
2. Operational costs are justified by program benefits..	4.25	1.029	Efficient
3. Budget allocation for SWM programs is properly utilized.	4.43	0.795	Efficient
4. The SWM program reduces waste sent to landfills.	4.38	0.874	Efficient
5. Recycling and composting significantly reduce waste volume.	4.38	0.993	Efficient
6. Waste collection services reach most households.	4.20	1.015	Efficient
7. Waste collection schedules are consistently followed.	4.50	0.893	Efficient
8. The LGU maximizes use of SWM facilities.	4.37	0.774	Efficient
9. Human resources are effectively utilized in SWM operations.	4.38	0.919	Efficient

Scale: (4.51 – 5.0 Very Efficient; 3.51 – 4.50 Efficient; 2.51 – 3.50 Neutral/Acceptable; 1.51 – 2.50 Inefficient; 1.0 – 1.50 Very Inefficient)

Perception of Efficiency of the Existing SWM System Implemented

Table 3 presents the perception of efficiency of the existing swm system implemented. The results showed that the respondents have a positive perception of the SWM system as they generally agree that it contributes to environmental cleanliness, improves public health, and promotes sustainability. This also reflects a high level of public trust in the system implemented in Passi City. Finally, respondents identified several areas for improvement, including strengthening waste segregation campaigns, increasing collection frequency, providing additional facilities, and enforcing SWM ordinances more strictly.

Table 3. Perception of Efficiency of the Existing SWM System

Statement	Mean	SD	Interpretation
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1. Perception on the Efficiency of SWM Model	4.49	0.647	Efficient
2. The current SWM system effectively manages community waste.	4.47	0.810	Efficient
3. The SWM program contributes to environmental cleanliness.	4.55	0.687	Very Efficient
4. Community participation in SWM programs is high.	4.35	0.809	Efficient
5. The SWM program improves public health and sanitation	4.55	0.730	Very Efficient
6. The SWM model implemented by the LGU is sustainable.	4.55	0.674	Very Efficient

Scale: 4.51–5.0- Very Efficient; 3.51–4.50- Efficient; 2.51–3.50- Neutral/Acceptable; 1.51–2.50- Inefficient; 1.0–1.50- Very Inefficient

The positive findings may also indicate the presence of effective policy implementation, stakeholder collaboration, and active community participation in the locality. Studies revealed that successful ecological solid waste management programs are often associated with strong political commitment, adequate funding, operational Materials Recovery Facilities, and environmental awareness campaigns. According to Cubebe (2021), communities with active environmental campaigns and public participation programs demonstrate higher compliance with waste management policies and better environmental outcomes. This suggests that the positive perception of the respondents may have been influenced by the local government’s consistent implementation of waste management activities and community involvement initiatives.

However, although the results generally indicate positive perceptions regarding the efficiency of the SWM model, contrasting findings from other studies suggest that not all communities experience the same level of effectiveness in ecological solid waste management implementation. Andaya et al. (2025) found that some barangays continue to experience difficulties in waste segregation compliance, irregular collection services, and insufficient public participation despite the implementation of RA 9003. Similarly, Domingo and Manejar (2021) explained that many local government units still struggle with inadequate funding, weak monitoring systems, and limited technical capacity, which negatively affect the sustainability of waste management programs. These contrasting findings indicate that while the present locality may demonstrate efficient waste management implementation, many Philippine communities continue to face operational and institutional challenges.

Additionally, some studies highlighted that environmental awareness alone does not always guarantee consistent compliance with waste management practices. Research conducted in several Philippine communities showed that improper waste segregation, littering, and open dumping remain prevalent despite awareness campaigns and environmental education programs. These findings imply that sustaining efficient SWM implementation requires continuous monitoring, policy enforcement, and behavioral reinforcement among residents.

Proposed Community-Based Ecological Solid Waste Management Plan

I. Introduction

Managing solid waste has become an important concern for many communities in the Province of Iloilo, especially in growing areas such as Passi City. As the population increases and daily activities continue to expand, more waste is produced from households, schools, markets, and business establishments. Although the current solid waste management system in Passi City is generally functioning well and is appreciated by many residents, there are still several concerns that need improvement to ensure a cleaner, safer, and more sustainable environment.

This proposed Ecological and Sustainable Solid Waste Management Plan was developed based on the experiences, observations, and suggestions shared by community members and stakeholders. Their insights are valuable because they come from people who directly encounter waste management issues in their everyday lives.

Community feedback not only helps identify areas that require improvement but also strengthens public participation and responsibility in environmental programs.

The plan aims to build a stronger partnership among local government units, barangays, schools, organizations, and residents in promoting proper waste management practices and environmental stewardship. It also supports the goals of Ecological Solid Waste Management Act of 2000 by encouraging waste reduction, segregation, recycling, composting, and responsible disposal practices.

II. Vision

A healthy, disciplined, and environmentally responsible community where every resident actively participates in maintaining a clean and sustainable environment.

III. Mission

To strengthen ecological solid waste management practices through continuous environmental education, improved waste collection services, active community participation, accessible recycling and composting programs, and proper enforcement of environmental policies.

IV. General Objective

To develop a sustainable and community-centered solid waste management system that promotes environmental cleanliness, public health, responsible waste disposal, and active participation among residents in Passi City and nearby communities.

V. Specific Objectives

- a. To increase community awareness regarding proper waste segregation and environmental responsibility.
- b. To improve the efficiency and consistency of waste collection services in different barangays.
- c. To encourage households, schools, and establishments to participate in recycling and composting activities.
- d. To strengthen the implementation of waste management ordinances and environmental policies.
- e. To promote long-term environmental awareness through continuous education and community involvement.

VI. Current Situation

The present solid waste management system in Passi City has already contributed positively to environmental cleanliness and sanitation. Residents recognize the efforts of the local government in conducting waste collection, implementing segregation practices, and promoting environmental programs within the community.

However, despite these positive developments, some challenges remain evident. Improper segregation of waste is still observed in certain areas, while limited recycling and composting facilities make it difficult for some residents to practice sustainable waste disposal consistently. Some communities also experience concerns regarding collection schedules and the enforcement of waste management ordinances. In addition, there is a growing need for continuous environmental education to strengthen public participation and awareness.

VII. Proposed Programs and Strategies

Key Area	Activity/ Intervention	Expected Outcome	Time Frame	Responsible Groups
A. Strengthening Waste	a. Conduct regular barangay	Residents become more knowledgeable and responsible in	Quarterly	LGU, Barangays, Schools

Key Area	Activity/ Intervention	Expected Outcome	Time Frame	Responsible Groups
Segregation Awareness	orientations on waste classification b. Distribute informational materials about biodegradable, recyclable, residual, and special waste c. Install clearly labeled waste bins in public places d. Organize school-based environmental campaigns and contests e. Launch community information drives through posters and social media	practicing proper waste segregation at source.		
B. Improving Waste Collection Services	4 Increase collection frequency in heavily populated areas 5 Implement clear collection schedules per barangay 6 Strengthen coordination between collection personnel and barangay officials 7 Provide monitoring mechanisms for collection concerns and complaints 8 Improve waste collection equipment and transportation support	Cleaner surroundings, reduced waste accumulation, and improved public satisfaction with waste collection services.	Continuous	SWM Office, Barangays
C. Expanding Recycling Facilities and Programs	a. Establish additional Materials Recovery Facilities (MRFs) in strategic barangays b. Install recycling stations in schools, markets, and public spaces c. Partner with recycling groups and junk buyers	Increased recycling participation and reduced volume of waste sent to disposal sites.	Within 1 year	1 LGU, NGOs, Private Groups

Key Area	Activity/ Intervention	Expected Outcome	Time Frame	Responsible Groups
	d. Conduct livelihood activities using recyclable materials			
	e. Organize regular recycling drives within communities			
D. Establishing Community Composting Centers	1. Develop composting areas in selected barangays 2. Conduct practical composting demonstrations and workshops 3. Encourage backyard composting among households 4. Use compost products for community gardening and agricultural activities 5. Provide recognition or incentives to active participants	Reduced biodegradable waste and increased production of organic fertilizer for community use.	Continuous	Agriculture Communities Office,
E. Strengthening Enforcement of Environmental Ordinances	a. Conduct regular inspections and monitoring activities b. Orient residents regarding environmental ordinances and penalties c. Train barangay officials and environmental enforcement teams d. Create community-based monitoring groups e. Apply fair and consistent sanctions for repeated violations	Improved compliance with waste management policies and increased community discipline.	Monthly	Barangay Officials, SWM Teams
F. Conducting Continuous Environmental Education Programs	a. Conduct quarterly seminars and workshops on ecological waste management	A more environmentally aware and proactive community that actively supports	Quarterly	Schools, Youth Groups, LGU

Key Area	Activity/ Intervention	Expected Outcome	Time Frame	Responsible Groups
	b. Integrate environmental topics into school and youth activities c. Organize clean-up drives and environmental campaigns d. Launch social media awareness programs e. Celebrate environmental events that promote community participation	sustainable waste management practices.		

These concerns highlight the importance of developing more responsive and community-based strategies that encourage cooperation and shared responsibility among all stakeholders.

VIII. Monitoring and Evaluation

Regular monitoring and evaluation will help determine whether the programs are effective and properly implemented.

Indicators

- Number of households practicing waste segregation
- Improvement in waste collection efficiency
- Participation in recycling and composting programs
- Reduction in improperly disposed waste
- Attendance in environmental activities and seminars

Evaluation Schedule

- Monthly monitoring activities
- Quarterly assessment meetings
- Annual review and updating of the SWM plan

IX. Sustainability Measures

To ensure the long-term success of the plan, the following measures will be strengthened:

- Continuous community participation and consultation
- Partnerships with schools, organizations, and private sectors
- Regular environmental education and awareness campaigns
- Allocation of funds for waste management projects
- Incentive and recognition programs for active barangays and households

X. Conclusion

The proposed Ecological and Sustainable Solid Waste Management Plan reflects the shared goal of building a cleaner, healthier, and more environmentally responsible community in Passi City and the Province of Iloilo.

The suggestions and experiences shared by residents demonstrate that effective waste management cannot rely solely on government programs. It also requires cooperation, discipline, and active participation from every member of the community. Through stronger waste segregation campaigns, improved collection systems, expanded recycling and composting programs, continuous environmental education, and proper enforcement of ordinances, the community can move toward a more sustainable future.

More importantly, this plan encourages individuals, families, schools, organizations, and local leaders to work together in protecting the environment and promoting responsible waste management practices for future generations.

Conclusions

Based on the findings of the study, the following conclusions were drawn:

1. The waste management system implemented by Passi City is functional and well-structured in compliance with Republic Act No. 9003 otherwise known as Ecological Solid Waste Management Act of 2000. The key components were already in place and regularly implemented. Moreover, the system is generally efficient, particularly in terms of waste collection and service delivery. However, improvements are still needed in resource management and facility utilization to maximize efficiency.
2. The community in Passi City has a positive perception of the SWM system, indicating that the programs are effective and beneficial to both environmental cleanliness and public health. Hence, despite the strengths of the system, community participation and compliance remain a challenge, especially in activities such as composting and proper waste segregation.
3. The implementation of the SWM model is aligned with the provisions of Republic Act 9003, but its long-term success depends on the continuous improvement, stronger enforcement, and active community involvement.

Recommendations

Considering the findings and conclusions of the study, the following recommendations are proposed:

For Local Government Unit (LGU)

The LGU must strengthen the information, education and communication campaigns to promote consistent waste segregation and community participation. These activities will also be helpful as continuous awareness programs can promote behavior change and encourage compliance among residents.

Moreover, grounded in the Theory of Planned Behavior (TPB), the study recommends improving attitudes, thus the LGU must intensify awareness campaigns that clearly communicate the environmental, economic, and health benefits of proper waste management practices such as segregation, recycling, and composting. When individuals recognize the positive outcomes of these practices, they are more likely to develop favorable attitudes and actively participate in the program.

In addition, it is necessary to enhance enforcement of SWM ordinances through strict monitoring and issuance of citation tickets to violators or non-compliant. This will ensure that policies are not only present but also followed. Then, improve the resource allocation and utilization by regularly evaluating SWM budgets and ensuring that funds are used efficiently.

Lastly, Passi City should expand and upgrade SWM facilities, such as Materials Recovery Facilities (MRFs) and composting centers, to accommodate growing waste management needs through increasing the frequency and reliability of waste collection services, especially in underserved areas.

For the Community

Residents should actively participate in waste segregation, recycling, and composting activities to support the effectiveness of the SWM system. Thus, community members should comply with local ordinances and take responsibility for proper waste disposal as participation in environmental programs and activities should be encouraged to promote a culture of sustainability.

To reinforce subjective norms, the study suggests promoting community-based initiatives that encourage collective participation and social influence. This may include engaging barangay leaders, schools, and local organizations as role models and advocates of proper SWM practices. Recognition programs, incentives, and public acknowledgments can also be implemented to create a culture where responsible waste management is socially expected and valued. When individuals perceive that important people around them support and practice SWM, they are more likely to conform and participate.

For Future Researchers

Future studies may explore other factors affecting waste management efficiency, such as financial sustainability, policy implementation, or technological innovations.

Therefore, researchers may also conduct comparative studies between different LGUs to identify best practices. Further research may include quantitative measures of waste reduction to support perception-based findings.

Overall, the study confirms that the SWM system in City of Passi, Province of Iloilo is efficient, but its sustainability depends on continuous collaboration between the LGU and the community. This includes strengthening the community participation, improving enforcement, and optimizing resources that will further enhance the success of the system and contribute to long-term environmental protection.

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