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Community Satisfaction Analysis of Organic Waste Management: A Case Study of Compost Houses and 3R Waste Collection Sites in Barru Regency

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ABSTRACT

This study aims to analyze community satisfaction with the management of organic waste through compost houses and 3R (Reduce, Reuse, Recycle) waste collection sites in Barru Regency. The research employs a qualitative descriptive method, using interviews, observations, and documentation to collect data from residents, waste management officers, and local government officials. The analysis focuses on several key indicators of satisfaction, including service quality, accessibility, environmental impact, and community involvement. The findings reveal that while most residents appreciate the existence of compost houses and TPS 3R as innovative waste management solutions, there are still challenges in terms of operational consistency, public awareness, and infrastructure support. The study concludes that enhancing community participation and strengthening institutional support are essential to improving organic waste management services in the region.

Keywords: Community,satisfaction, organic,waste, compos,3R

A.INTRODUCTION

Waste management has become a pressing issue in many developing countries, including Indonesia. The increasing population growth and urbanization have significantly contributed to the volume of waste generated daily, which requires effective and sustainable handling strategies. Among the types of waste, organic waste is the most dominant, comprising approximately 60% of total

household waste in Indonesia (Ordieres-Meré et al., 2020). This reality poses a critical environmental challenge if not managed properly.

In response to this, the Indonesian government has encouraged various community-based initiatives such as the development of compost houses and the establishment of TPS 3R (Reduce, Reuse, Recycle Waste Management Sites). These programs aim to empower communities to become more active in managing organic waste. Through education and technical support, these initiatives seek to reduce dependence on landfills and promote circular economy practices (Setyawati, 2022).

The compost house and TPS 3R in Barru Regency are concrete examples of how the community and local government can work together to implement sustainable organic waste management. These facilities serve not only as waste processing units but also as educational centers to raise awareness about the importance of waste segregation and composting. Such innovations reflect a shift from centralized waste disposal systems to more decentralized, community-based solutions.

Despite these positive developments, the success of such initiatives largely depends on public participation and satisfaction. When the community perceives waste management services as effective, reliable, and transparent, their willingness to participate increases. Conversely, low satisfaction levels may lead to apathy and improper waste disposal practices (Marodiyah et al., 2023).

Community satisfaction is an important indicator in evaluating the effectiveness of public services, including waste management systems. Satisfaction levels can reveal gaps in service delivery, identify areas for improvement, and provide insights into user perceptions. Therefore, assessing community satisfaction with compost houses and TPS 3R operations is essential for the continuous improvement of waste management strategies.

Public perception is influenced by various factors such as the accessibility of services, quality of infrastructure, level of socialization, and the consistency of waste collection schedules. These dimensions must be thoroughly examined to ensure that the systems implemented truly meet the expectations of the community. Furthermore, satisfaction is also shaped by how transparent and responsive the management team is to complaints and suggestions.

In addition, cultural attitudes and knowledge regarding waste segregation play a pivotal role in shaping community involvement. In some areas, there is still limited awareness about the environmental benefits of composting organic waste. This underlines the importance of continuous education and outreach programs to increase environmental literacy at the grassroots level (Rachman et al., 2023).

Local governments, as stakeholders, must ensure that community-based waste management systems are equipped with adequate facilities and skilled human resources. Investment in training, tools, and monitoring systems is vital to maintain the sustainability and effectiveness of the compost houses and TPS 3R. Moreover, collaboration between local authorities, NGOs, and residents enhances collective ownership and accountability.

The sustainability of organic waste management also depends on economic incentives and market availability for compost products. When communities can generate income through the sale of compost, it adds economic value to waste management and motivates continued participation. This dual benefit—environmental and economic—helps strengthen long-term commitment.

Evaluation of satisfaction must also consider gender roles, since waste management at the household level is often linked with women's domestic responsibilities. Inclusion of women in decision-making and training processes ensures a more equitable and holistic approach to waste reduction at the community level.

Environmental policies and regional regulations significantly influence how effectively local waste management initiatives function. Clear policy frameworks, coupled with enforcement mechanisms, can strengthen compliance and encourage innovative solutions in organic waste processing. Thus, alignment with national and regional strategies is necessary.Digitalization and data monitoring systems can further improve transparency and efficiency in waste management. Tools such as online reporting, community feedback applications, and GIS-based waste tracking can help optimize collection routes and monitor public satisfaction in real-time.

To accurately measure satisfaction, researchers can utilize indicators such as timeliness, service reliability, staff competence, and complaint resolution. Combining quantitative surveys with qualitative interviews provides a comprehensive picture of community experiences and expectations.This study aims to analyze community satisfaction toward organic waste management through the case of the Compost House and TPS 3R in Barru Regency. It focuses on assessing the level of satisfaction and identifying contributing factors that influence public perception of these services.

Understanding the strengths and weaknesses of the current system is crucial for developing policy recommendations that support more effective and community-friendly waste management practices. The outcomes of this research are expected to guide local governments in refining their waste management strategies.

Additionally, this study contributes to academic discourse by offering empirical data on community satisfaction within the context of sustainable waste management in rural areas. It highlights the intersection of environmental management, public services, and community empowerment.This introduction builds upon previous studies that emphasize the importance of integrating social dimensions into environmental policies. While technical solutions are necessary, they must be supported by strong community engagement and institutional commitment (Setyawati, 2022).

Finally, the research underscores the importance of feedback loops between community members and service providers. Transparent communication, periodic evaluations, and responsiveness to community inputs are essential to maintain trust and improve service delivery over time.The successful implementation of organic waste management systems such as compost houses and TPS 3R requires a multidimensional approach. It must combine infrastructure, community participation, education, policy support, and continuous evaluation to ensure long-term sustainability and public satisfaction.

C.RESEARCH METHODOLOGY

This study employs a qualitative descriptive approach to explore community satisfaction with the management of organic waste through the Compost House and TPS 3R facilities in Barru Regency. The qualitative method is appropriate for gaining in-depth insights into people's perceptions, experiences, and expectations regarding waste management services at the grassroots level.

The research was conducted in selected areas of Barru Regency where the Compost House and TPS 3R are actively operating. These locations were purposively chosen based on the level of community involvement and the availability of functioning waste management systems. The study focuses on individuals who directly engage with or are affected by the organic waste processing system, including local residents, community leaders, waste management workers, and local government representatives.

Data were collected through in-depth interviews, observation, and documentation. Semi-structured interviews were conducted with 15 participants, consisting of residents who utilize the Compost House and TPS 3R services, local environmental officers, and facility operators. The interview guide covered themes such as service quality, accessibility, public participation, staff responsiveness, and perceived benefits or limitations of the current system.

Participant observation was also conducted to gather contextual data regarding daily operations, community interaction, and the physical condition of the facilities. This enabled the researcher to better understand the practical aspects of waste sorting, compost production, and public service delivery. Additionally, relevant documents such as program reports, community feedback, and government policy documents were reviewed to support the analysis.

The data were analyzed using thematic analysis. Interview transcripts and field notes were coded and categorized into themes that reflect patterns and variations in community satisfaction. This process involved identifying key ideas, comparing responses across different groups, and linking findings to the broader literature on waste management and public service satisfaction.

To ensure the validity of the findings, triangulation was applied by combining multiple sources of data (interviews, observations, and documents) and involving diverse participants. Member checking was also conducted by sharing preliminary findings with several informants to confirm the accuracy and credibility of the interpretations.Ethical considerations were observed throughout the research process. Participants provided informed consent, and anonymity was maintained to protect their identity. The research received permission from relevant authorities and adhered to the principles of transparency and respect for local customs during data collection.

This methodological approach enables the study to capture the nuanced experiences and subjective assessments of community members, providing a grounded understanding of satisfaction with organic waste management services in the context of Barru Regency.

- Framework of Thought

To further clarify this framework of thought, the researcher will present it in the form of a picture, as below:

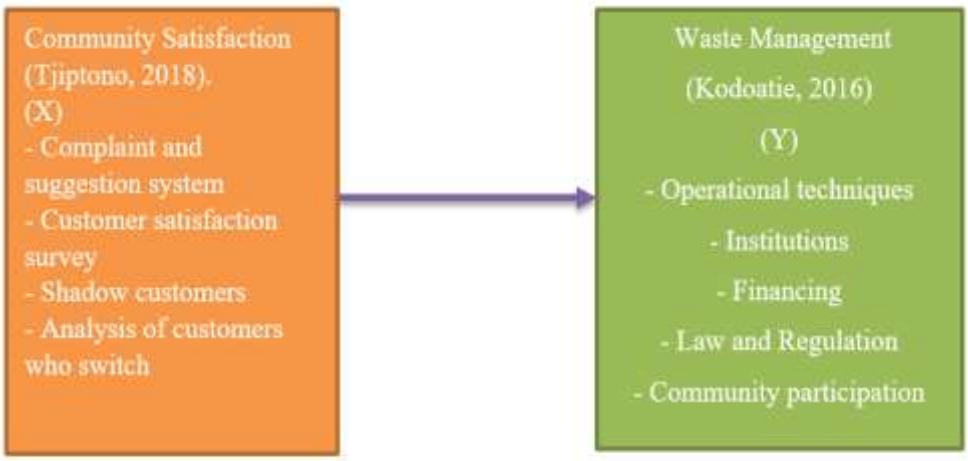

Figure 1: Framework of Thought

C. RESEARCH RESULTS AND DISCUSSION

- Research Results

This study was conducted to examine the significant influence of community satisfaction on organic waste management at the Compost House and 3R Temporary Waste Disposal Site (TPS 3R) in Barru Regency. Based on the formulated hypothesis, it is proposed that community satisfaction positively and significantly affects the performance of organic waste management services in the region. Various indicators were used to measure this relationship, including complaint and suggestion systems, satisfaction surveys, mystery customer evaluations, and switching customer analysis.

From the results of the validity test, each questionnaire item showed a correlation coefficient greater than the r-table value of 0.361 for a sample size of 30 respondents. This indicates that all questionnaire items are valid and capable of measuring the intended variables. Meanwhile, the reliability test using Cronbach's Alpha yielded a value of 0.837, surpassing the threshold of 0.6, which means the instrument is reliable and consistent for data collection purposes in this research.

The descriptive analysis revealed that the majority of respondents agreed that human resources had been adequately prepared to support waste management operations. Specifically, 62% of respondents stated that the availability of human resources contributed significantly to the effective handling of complaints and suggestions. This underscores the crucial role of human capital in sustaining environmental service delivery, especially in the context of compost and 3R TPS facilities.

Simple linear regression analysis was conducted to test the influence of community satisfaction on organic waste management. The regression equation obtained was $Y = 3.261 + 0.524X$, where Y represents organic waste management and X represents community satisfaction. The positive regression coefficient of 0.524 confirms that for every unit increase in community satisfaction, organic waste management performance is expected to increase by 0.524 units, holding other variables constant.

The t-test was used to test the significance of the independent variable. The t-count value obtained was 5.421, which is greater than the t-table value of 2.048 at a significance level of 0.05. Therefore, the hypothesis that community satisfaction has a significant positive effect on organic waste management is accepted. This finding provides empirical evidence that improved public service delivery is linked to higher community satisfaction.

The ANOVA test further validated the regression model. The F-count value of 29.390 was significantly higher than the F-table value of 4.17, indicating that the regression model used is statistically significant. Thus, community satisfaction explains a considerable portion of the variance in organic waste management performance. These findings support the need for policy improvements in community engagement strategies.

Regarding the complaint and suggestion system indicator, 62% of respondents agreed or strongly agreed that support personnel were readily available

to address public concerns. This suggests that the feedback system is functioning adequately, and that the management has invested in developing human resources to listen and respond to complaints. Nonetheless, this still leaves a gap of 38% of respondents who remain neutral or disagree.

The survey on customer satisfaction provided further insight. While 53% of respondents doubted whether customer satisfaction surveys were conducted regularly, this indicates a weakness in feedback collection procedures. Effective service evaluation depends on regular, structured feedback mechanisms to detect areas requiring improvement. These results call for more transparent and periodic surveys.

Mystery customer evaluations were also explored to assess the objectivity of service quality measurement. About 63% of respondents agreed or strongly agreed that mystery customers are necessary to evaluate service strengths and weaknesses. These anonymous assessments provide unbiased insight into the customer experience and can identify lapses that regular supervision may overlook.

Interestingly, only 50% of respondents believed that special officers had been assigned to handle customer situations. This response points to a potential lack of clarity or communication regarding staff roles and responsibilities. The absence of dedicated personnel could negatively affect the speed and quality of complaint resolution in the waste management system.

Cooperation among various stakeholders was considered another vital factor. A notable 84% of respondents agreed that effective waste management requires collaboration across different sectors, including local government, community groups, and environmental organizations. This finding emphasizes that an integrated approach is more sustainable than siloed efforts in addressing environmental challenges.

In the switching customer indicator, the research found a positive relationship between customers who switch services and organic waste

management. Respondents suggested that when service quality dropped, they were more likely to discontinue participation or explore alternative waste disposal options. Thus, customer loyalty is influenced by consistent and quality service.The coefficient of determination (R^2) obtained from the regression analysis was 0.624. This means that 62.4% of the variation in organic waste management performance can be explained by community satisfaction. The remaining 37.6% could be due to other factors not examined in this study, such as funding, infrastructure, or policy consistency.

These statistical findings support the hypothesis that customer satisfaction is a predictor of effective organic waste management. The operational implications of these results are crucial, especially for local government and waste management institutions that aim to promote environmental sustainability and community well-being.The positive and significant correlation found implies that as satisfaction increases, so does participation and cooperation from the community in supporting composting and waste separation programs. This highlights the importance of maintaining a responsive service system that fosters community trust and involvement.

Moreover, it was discovered that responsiveness to feedback directly influences satisfaction levels. When the management acts on complaints, it not only improves service delivery but also enhances credibility and accountability, thereby strengthening the public's willingness to participate.The lack of regular customer satisfaction surveys was viewed critically by more than half the respondents. This aspect of service management must be addressed urgently, as understanding citizens' perceptions is essential for continuous improvement. Transparent reporting of survey outcomes could further increase trust.

Mystery customer feedback, when managed appropriately, could serve as a tool for internal benchmarking. These assessments can be used not only to evaluate the external aspects of service delivery but also to train staff in handling real-time service expectations and improving interpersonal communication.Inter-agency

cooperation was emphasized as key to success. This is particularly true in rural or semi-urban regions like Barru, where logistical challenges and limited budgets can be alleviated by resource sharing, joint training programs, and community-based monitoring initiatives.

Another key result from the study was that human resources play a determining role in handling operational functions and managing community interactions. Trained personnel act as the frontline agents in sustaining quality, thereby influencing public attitudes and behaviors toward organic waste management practices.The research also found that low trust in feedback mechanisms could discourage people from using formal complaint systems. If individuals feel their voices are ignored, satisfaction and participation may decline, leading to reduced service usage and less effective waste sorting at the source.

The responses related to customer switching reflect the competitive environment of service delivery. Even in the context of government-managed programs, people compare service efficiency with other providers, including informal collectors or private waste contractors. Maintaining high standards is essential to avoid losing public support.This study reinforces the need for continuous capacity building among the workforce. Workshops, monitoring tools, and professional development can elevate staff effectiveness, which directly translates to better user experiences and higher community engagement in compost and TPS 3R facilities.

Evaluation systems such as mystery customers and satisfaction surveys must be institutionalized and used consistently to track performance. These tools should not be viewed as optional add-ons, but rather as core components of a service-driven public management framework.Communication remains an integral factor in ensuring that customers are aware of their rights, the services available, and how to provide feedback. A well-informed public is more likely to cooperate and contribute to the long-term success of organic waste programs.

The study concludes that public satisfaction is both a driver and a reflection of service performance in environmental management. Local governments must integrate satisfaction metrics into their strategic planning and prioritize citizen-centric approaches to waste service reform.In summary, the research affirms the hypothesis that community satisfaction significantly affects organic waste management. Through comprehensive testing—including validity, reliability, regression, t-test, and ANOVA—the study offers strong evidence that informed, satisfied citizens are essential partners in sustainable waste practices.

- Discussion

The findings of this study reveal that community satisfaction significantly and positively influences organic waste management at the Compost House and TPS 3R in Barru Regency. This result confirms the hypothesis and reinforces existing literature emphasizing that public satisfaction is a critical determinant in the success of public services (Dwiyanto, 2006; Parasuraman et al., 1988). The significant correlation between satisfaction and performance indicates that when citizens perceive services as effective and responsive, they are more likely to participate and comply with waste management programs.

The role of human resources as indicated by the "complaint and suggestion system" was particularly highlighted, where 62% of respondents agreed that personnel support was adequate. This reflects the importance of investing in capacity building and training for service personnel, who serve as the direct interface with the community. As suggested by Kotler and Keller (2016), the quality of human interaction in service delivery can significantly affect customer satisfaction and loyalty.

Conversely, the limited trust in customer satisfaction surveys—with 53% of respondents expressing doubt over their regular implementation—indicates a gap in continuous evaluation and transparency. This is concerning, as feedback loops are essential in public service improvement. Research by Osborne et al. (2013)

suggests that without mechanisms for monitoring satisfaction over time, service providers risk becoming detached from user expectations and experiences.

The mystery customer evaluation dimension presents an opportunity. With 63% of respondents affirming the need for such evaluations, this approach can help uncover real-time service weaknesses. However, only 50% believed that specialized staff were available to handle customer complaints, revealing a mismatch between evaluation and response mechanisms. According to Grönroos (2007), service recovery is just as important as service quality, especially in maintaining public trust.

Another critical observation is the strong support for inter-organizational collaboration, with 84% of respondents emphasizing its necessity. This aligns with governance literature advocating multi-stakeholder partnerships in achieving environmental sustainability (Rhodes, 1997). In the case of waste management, effective collaboration between municipal authorities, local leaders, NGOs, and citizens is essential for operational efficiency and innovation.

The analysis of switching customers showed that dissatisfaction may lead to community withdrawal from formal waste services. This is consistent with Hirschman's (1970) theory of "exit, voice, and loyalty," where dissatisfied users either express complaints, exit the service, or remain loyal. In the context of Barru Regency, the tendency to exit implies that service quality must be consistently high to prevent disengagement.Statistical testing strengthens the reliability of these findings. The simple linear regression, with a positive coefficient of 0.524 and an R^2 value of 0.624, confirms that over 62% of variance in waste management performance can be explained by community satisfaction. This suggests a strong predictive relationship and indicates that other influencing factors, though present, play a secondary role.

The validity and reliability tests further affirm the robustness of the instrument used. High Cronbach's Alpha and item-total correlations establish

internal consistency, lending credibility to the data interpretation. This methodological rigor enhances the confidence in the study's contribution to the discourse on environmental service delivery.Moreover, the significant t-test and ANOVA results support the regression analysis, confirming that the observed relationships are statistically meaningful and not due to random chance. These results align with those of previous empirical studies which suggest that community-centered service delivery models yield better environmental outcomes (Setiawan & Winarno, 2019).

One limitation identified is the lack of systematized satisfaction measurement, which leads to potential blind spots in quality improvement efforts. Moving forward, local governments should institutionalize routine public satisfaction surveys, ensure result transparency, and incorporate community feedback into strategic planning.

Another implication concerns the role of public awareness and communication. Satisfaction is often influenced not just by service outcomes but also by expectations. As Zeithaml et al. (2006) point out, managing customer expectations through clear communication and education is vital in enhancing satisfaction and encouraging responsible environmental behavior.It is also important to note the challenge of sustaining satisfaction over time. Even if initial satisfaction is high, it may decline if services are not continuously improved. This calls for adaptive management approaches, where policies and operations are iteratively adjusted based on regular feedback and performance data.

Furthermore, the importance of service visibility emerged implicitly from the findings. Some community members may be unaware of available feedback channels or personnel roles, leading to misperceptions about service responsiveness. This suggests a need for better public relations and service marketing within the public sector.

In conclusion, this study reinforces the theory that citizen satisfaction is not merely an outcome but a driving force in service performance, particularly in organic waste management. The government of Barru Regency must take proactive steps to improve communication, staff training, evaluation systems, and multi-sectoral partnerships to ensure that satisfaction levels remain high and operational goals are met.Future research could expand on this study by exploring additional moderating variables such as income level, education, or cultural attitudes toward waste management. Longitudinal research could also reveal how satisfaction and participation evolve over time.

D.CONCLUSION AND RECOMMENDATIONS

- Conclusion

This study concludes that community satisfaction plays a significant and positive role in the management of organic waste at the Compost House and TPS 3R in Barru Regency. The research found that human resource readiness, customer feedback systems, shadow customer evaluations, and collaboration with stakeholders significantly influence the community's satisfaction with organic waste management services. Specifically, 62% of respondents agreed that human resources have been prepared adequately, indicating the importance of personnel in service delivery.

However, only 53% of respondents believed that customer satisfaction surveys are conducted regularly, suggesting gaps in monitoring and evaluation practices. Furthermore, while 63% of respondents support the implementation of shadow customer techniques to assess service quality, only half believe that specialized officers are assigned to handle customer-related issues. Additionally, 84% agree on the importance of inter-agency cooperation in improving organic waste processing, emphasizing the need for integrated governance.

Statistical analysis confirmed these findings through simple regression, t-tests, and ANOVA, indicating a significant relationship between public satisfaction and waste

management performance. The positive regression coefficient and strong R^2 value validate the predictive power of satisfaction in determining the effectiveness of service delivery.

- Recommendations

Enhance Human Resource Capacity Local authorities should invest in continuous training and development of personnel involved in organic waste management. Skilled staff are essential for maintaining service quality and building trust with the community.

Institutionalize Regular Feedback Mechanisms Regular and transparent customer satisfaction surveys must be conducted to assess service gaps and identify areas for improvement. Results should be made public and used in decision-making processes.Implement Shadow Customer Evaluations Introducing anonymous service assessments (shadow customers) can help evaluate real-time service quality and expose weaknesses that may not be visible through conventional surveys.

Assign Specialized Complaint Officers Dedicated personnel should be designated to handle community complaints and suggestions. This will ensure timely resolution and increase responsiveness, thus improving overall satisfaction.Promote Multi-Stakeholder Collaboration Effective waste management requires cooperation between government agencies, NGOs, private sectors, and the local community. Collaborative planning and resource sharing can optimize outcomes. 6. Public Awareness and Education Campaigns

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LAMPIRAN

Hasil r hitung

Variabel	Indikator	Person Correlation r hitung	r tabel	Nilai Signifikansi	Keterangan
Kepuasan Masyarakat	SKS1	0.063	0,2764	0.01	Tidak Valid
	SKS2	0,457	0,2764	0.01	Valid
	SKS3	0,179	0,2764	0.01	Tidak Valid
	SKS4	0,236	0,2764	0.01	Tidak Valid
	SKS5	0.099	0,2764	0.01	Tidak Valid
	SKP1	0,614	0,2764	0.01	Valid
	SKP2	0,714	0,2764	0.01	Valid
	SKP3	0,573	0,2764	0.01	Valid
	SKP4	0,572	0,2764	0.01	Valid
	SKP5	0,051	0,2764	0.01	Tidak Valid
	SKP6	0,749	0,2764	0.01	Valid
	SKP7	0,659	0,2764	0.01	Valid
	SKP8	0,667	0,2764	0.01	Valid
	SKP9	0,749	0,2764	0.01	Valid
	SKP10	0,642	0,2764	0.01	Valid
	PB1	0,545	0,2764	0.01	Valid
	PB2	0,422	0,2764	0.01	Valid
	PB3	0,543	0,2764	0.01	Valid
	APB1	0,370	0,2764	0.01	Valid
	APB2	0,348	0,2764	0.01	Valid
Pengelolaan Sampah	TO1	0,229	0,2764	0.01	Valid
	TO2	0,751	0,2764	0.01	Valid
	TO3	0,573	0,2764	0.01	Valid
	K1	0,814	0,2764	0.01	Valid
	K2	0,772	0,2764	0.01	Valid
	P1	0,692	0,2764	0.01	Valid
	P2	0,500	0,2764	0.01	Valid
	HP1	0,196	0,2764	0.01	Tidak Valid
	PSM1	0,262	0,2764	0.01	Tidak Valid
	PSM2	0,073	0,2764	0.01	Tidak Valid