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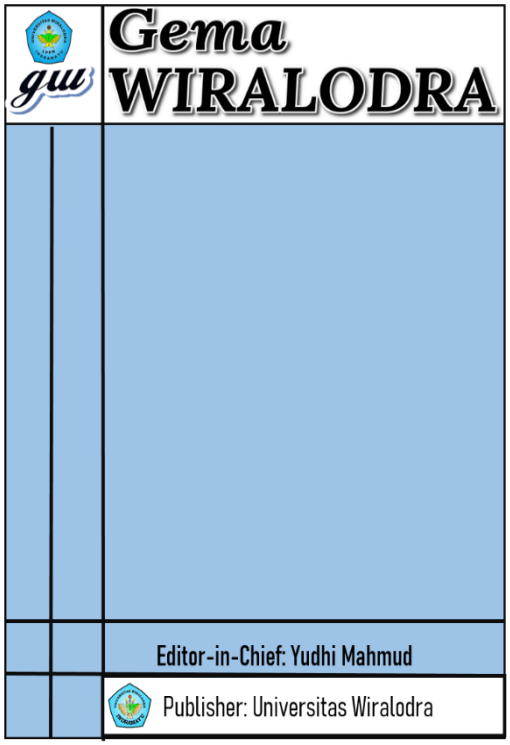

Strengthening the Retribution System for Waste Management Services in Indramayu Regency Policy Review and Implementation Challenges

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Strengthening the Retribution System for Waste Management Services in Indramayu Regency Policy Review and Implementation Challenges

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Abstract
Waste management at the regional level remains a multidimensional challenge encompassing fiscal, institutional, and social dimensions. This study analyzes the waste service fee system in Indramayu Regency to identify its main barriers and propose practical reform measures. Using a descriptive-qualitative approach supported by regulatory and institutional analysis, the research draws on secondary data from laws, budget documents, the 2024 tariff update report, and a Focus Group Discussion (FGD) with relevant stakeholders. The findings indicate that the current system achieves only 14–20% cost recovery, with tariffs far below actual service costs. Institutional weaknesses are evident in fragmented roles between the Environmental Agency (DLH), the Waste Management UPTD, and the Regional Revenue Agency (Bapenda), resulting in poor data integration and ineffective collection. Public compliance also remains low due to negative perceptions of service quality, perceived unfairness in tariff structures, and limited transparency in fund management. Strengthening the system requires phased reforms, including tariff recalibration, database integration, service quality improvements, and stronger public communication. With these measures, Indramayu's fee system can evolve into a sustainable and accountable foundation for regional waste governance.
Keywords: Waste Fees, Local Policy, Public Service Governance, Indramayu

1. Introduction

The waste problem in Indonesia has long been a multidimensional public issue, encompassing environmental, health, social, and fiscal governance aspects. According to data from the National Waste Management Information System (SIPSN), national waste generation in 2023 reached over 38 million tons, yet only about 62.62% was managed and merely 13.84% successfully reduced. This situation highlights a significant gap between waste generation and handling capacity, indicating systemic weaknesses in waste management—particularly at the regional level (Pires et al., 2011).

Most waste originates from households and commercial areas, characterized by a typical composition: approximately 60–75% organic waste, per capita waste generation of 0.40–0.67 kg/day, and a density of up to 200 kg/m³. This configuration also applies to Indramayu Regency, an agrarian region currently experiencing rapid urbanization. With a population of around 1.8 million, wide geographical distribution, and growing residential and commercial zones, the complexity of waste management in Indramayu continues to increase.

Several studies confirm that similar problems occur in other regions. For example, in Semarang City, Jaya et al. (2022) revealed that the high cost of waste management has become a burden on the regional budget (APBD). The ineffectiveness of service fee collection is identified as a root issue, with revenue from the waste sector falling far short of operational and capital expenditure needs. A similar concern was expressed by Saraswati et al. (2023) in the context of Malang City, where weak policy implementation persists despite the existence of local regulations—further exacerbated by a lack of facilities, human resources, and public awareness.

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Nationally, the government targets a 30% reduction and 70% handling of waste by 2025 through the National Waste Management Strategy (Jakstranas). However, achieving this target heavily depends on the capacity of local governments to build professional and sustainable waste management service systems. Unfortunately, regional fiscal capacity remains limited. According to data from the Ministry of Home Affairs, the environmental sector receives only 1.72% of the regional budget, while the waste management sector is allocated merely around 0.64%. In Indramayu Regency, the environmental sector experiences a fiscal deficit exceeding IDR 43 billion, with waste service revenues amounting to only IDR 5.66 billion compared to expenditures of IDR 48.9 billion. This means waste management services rely heavily on general subsidies, not on an independent financing scheme. This fiscal limitation is a reflection of the broader decentralization challenges in Indonesia, where local governments often lack the autonomy and resources to fund essential services sustainably (Laksana, 2022).

Law No. 1 of 2022 on Central and Regional Fiscal Relations (UU HKPD) emphasizes the importance of optimizing local revenue (PAD), including from service fees. In response, the Indramayu Regency Government issued Regional Regulation No. 1 of 2024 and Regent Regulations No. 13 and 82 of 2024 as the legal framework for operationalizing waste service fees. However, existing regulations remain insufficient to overcome structural challenges. The latest tariff calculation report shows that current revenue covers only 14% of the total actual need (IDR 38.8 billion/year), and even under a minimal scenario (covering only OPEX), a significant gap remains (IDR 27.3 billion needed).

Hendra (2016) highlights that one of the core weaknesses in Indonesia's waste management lies in its institutional and financial aspects. In contrast to South Korea, which successfully upholds the reduce-reuse-recycle (3R) principles through strong regulatory backing and public participation, Indonesia lags behind in terms of regional commitment, human resources, and institutional consistency. This is also evident in Indramayu, where fragmented functions between the Environmental Agency (technical unit) and the fee-collecting unit result in a weak system for updating customer data.

Public resistance to paying service fees also presents a significant challenge. Many customers feel that services are neither evenly distributed nor consistent, which discourages payment. This phenomenon is supported by a study by Nurlaeli et al. (2025) in Cilegon City, which found that low collection coverage, weak oversight, and limited infrastructure are the primary factors behind the ineffectiveness of the waste management system.

In another context, a study in Batang Regency by Gilang & Manar (2025) emphasized that the success of service fee systems strongly depends on collaborative governance involving the government, private sector, and the community. In Batang, although the institutional structure is relatively clear, low public awareness and weak accountability have prevented the system from significantly impacting waste reduction.

Thus, strengthening the waste service fee system in Indramayu is not merely a matter of tariff calculation, but involves synergy among legal, fiscal, institutional, and socio-cultural dimensions. This makes the present study both relevant and necessary—not only to identify the factors hindering effective service fee collection in Indramayu Regency, but also to formulate data-driven policy solutions grounded in regulation and local context. It is hoped that this research will contribute both theoretically to the literature on public policy and practically to the development of a fair, accountable, and sustainable waste management system.

Despite the presence of a new regulatory framework—Regional Regulation No. 1/2024 and Regent Regulations No. 13/2024 and No. 82/2024—the performance of Indramayu's waste management retribution system has not been able to cover the actual service costs. The current cost recovery remains at only 14–20 percent, while the existing tariff structure is misaligned with the ideal cost structure, raising concerns of social fairness across user categories. At the

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same time, fragmented authority among the Environmental Agency (DLH), the Waste Management Technical Unit (UPTD), and the Regional Revenue Agency (Bapenda) has resulted in non-integrated customer databases and weak billing performance. Public compliance is also low, influenced by perceptions of poor service quality, a flat tariff system, and the absence of adequate public communication.

Addressing these issues requires a comprehensive perspective that connects fiscal (tariff–cost alignment), institutional (roles, processes, and data integration), and social dimensions (compliance and public perceptions). However, existing studies on regional waste financing have not yet provided such an integrated analysis in the context of Indramayu. This study seeks to fill that gap by formulating policy options for strengthening the retribution system that are both evidence-based and contextually relevant. The guiding research question is: How can Indramayu design a waste retribution system that is socially equitable, fiscally sustainable, and institutionally feasible, along with clear indicators of success?

To answer this question, the study aims to: (i) map the gap between tariffs, costs, and cost recovery; (ii) assess governance arrangements and inter-agency data/billing mechanisms; (iii) identify social factors behind compliance and disincentives; and (iv) develop practical policy implementation options specifying actors, stages, and performance indicators.

By doing so, the study intends to provide twofold contributions. Theoretically, it enriches the literature on public service governance by illustrating how institutional fragmentation and tariff design affect both service effectiveness and citizen compliance in a local government setting. Practically, it offers a policy roadmap for the Indramayu government, including database integration between DLH–UPTD–Bapenda, tariff reformulation based on fairness and ability to pay, and communication strategies to improve public trust—each supported by measurable performance indicators.

2. Research Methodology

This study employs a descriptive qualitative approach, grounded in a policy and regulatory analysis framework, complemented by an institutional review of the implementation of waste service fees in Indramayu Regency. The research process is divided into three interrelated stages: (1) data collection, (2) regulatory and institutional analysis, and (3) synthesis of findings and policy recommendations.

2.1 Data Collection Stage

The study relies on secondary data obtained from policy documents, regional regulations, technical reports, and relevant strategic planning materials. These documents include:

1) Law No. 1 of 2022 on Fiscal Relations between the Central Government and Regional Governments;
2) Regent Regulations (PERBUP) No. 13 and No. 82 of 2024 concerning procedures for collecting general service fees;
3) The 2024 Tariff Update Report for waste management service fees in Indramayu Regency;
4) Strategic planning documents related to waste management;
5) Budget data and organizational structures obtained from the Environmental Agency (DLH) of Indramayu Regency and other relevant institutions.

In addition to document analysis, the study incorporates insights from a formal Focus Group Discussion (FGD) held on 18 September 2024 at the meeting room of the Environmental Agency (DLH) of Indramayu, located in Sindang District. The session was chaired by Endi Wahyadi, S.IP., M.Si. from DLH and took place from 09.00 WIB to 14.00 WIB.

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The FGD was attended by 15 participants, including representatives from the Environmental Agency (DLH), the Waste Management Technical Unit (UPTD), the Regional Revenue Agency (Bapenda), the Ministry of Home Affairs (SUPD 1), the NPMC Consultant Team, and the IDSRF Regional II Technical Assistance Team. This ensured institutional, fiscal, and technical perspectives were well represented.

The discussion agenda focused on (i) alignment of the existing tariff structure with service costs, (ii) institutional coordination and data integration, and (iii) compliance and public perception. The session concluded with the signing of an official report which recorded consensus on tariff calculations performed using the Ideal Waste Management Cost Calculator in line with Ministry of Home Affairs Regulation No. 7 of 2021. The outcomes of this FGD serve as an essential primary input, triangulated with findings from secondary documents.

2.2 Regulatory and Institutional Analysis

At this stage, the study adopts a normative and institutional mapping method, focusing on three core areas:

1) Legal coherence: the extent to which national laws, local regulations, and technical guidelines are aligned;
2) Institutional roles and mandates: an analysis of the distribution of duties and authorities among the Environmental Agency (DLH), the Waste Management Technical Implementation Unit (UPTD Kebersihan), the Regional Revenue Agency (BAPENDA), and other relevant bodies as stipulated in the Regent Regulations;
3) Implementation readiness: an assessment of the operational capacity of the local government, tariff-setting mechanisms, and public communication strategies.

The analysis also evaluates the degree to which Ministry of Home Affairs Regulation No. 7 of 2021 on the calculation of service fees is applied consistently, particularly regarding the structure of sub-systems (collection, transportation, processing, and final disposal), as well as the use of the Ideal Waste Management Cost Calculator.

2.3 Synthesis and Policy Recommendations

The final stage of this research involves presenting and clarifying the findings to the Government of Indramayu Regency through an FGD. This step includes final verification of the updated fee calculations and consensus-building around the findings, which serve as the foundation for policy recommendations on waste service fee reform.

The synthesis process integrates legal provisions, institutional structures, and technical data to formulate evidence-based and contextually relevant policy recommendations. The primary objective is to enhance the effectiveness of fee policy implementation and support the regional government's efforts to improve revenue generation, accountability, and the quality of waste management services.

2.4 Research Limitations

This study has several limitations that should be acknowledged to clarify its scope and boundaries. First, the analysis is primarily qualitative, relying on secondary documents and a single FGD session; therefore, the findings may not fully capture the diversity of community perspectives across all districts in Indramayu. Second, the temporal scope is limited to fiscal years 2021–2024, which restricts the ability to observe longer-term financial and institutional dynamics. Third, while the study identifies issues of compliance and willingness to pay, it does not include a quantitative household survey or economic valuation that could provide a more precise basis for tariff differentiation. Finally, the FGD participants were mostly institutional actors, so

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broader societal perspectives such as informal sector workers and ordinary households remain underrepresented.

These limitations do not undermine the validity of the findings, but they highlight the need for future research to adopt a mixed-methods approach, combining large-scale household surveys, quantitative willingness-to-pay analysis, and comparative case studies across other regions to provide a more comprehensive evidence base for policy design.

3. Result and Discussion

3.1 Fiscal Imbalance in Waste Management Service Financing

The fundamental challenge in strengthening the waste service fee system in Indramayu Regency lies in the stark imbalance between the actual financial needs of service delivery and the revenue generated from regional retribution. According to the 2024 Budget Realization Report (LRA) of the Environmental Agency (DLH) of Indramayu Regency, total revenue from waste fees amounted to only IDR 5.66 billion, while total expenditure for the environmental sector reached IDR 48.9 billion—resulting in a budget deficit of more than IDR 43 billion. This means that approximately 88% of environmental expenditure is not covered by sectoral revenue, but instead relies on general budget allocations, which undermines fiscal efficiency and the long-term sustainability of public services.

Furthermore, the cost calculation report prepared by TA-IDSRF Regional 2 (2024) confirms that the ideal annual cost for waste management (CAPEX + OPEX) is estimated at IDR 38.8 billion. This figure includes infrastructure investments, fleet procurement, final disposal operations, as well as waste collection and transportation. Even under a minimum operational expenditure (OPEX-only) scenario, the required budget remains at IDR 27.3 billion. Thus, the current cost recovery rate from retribution is only around 14.4% of the ideal need, or 20.7% under the minimum scenario. This fiscal imbalance is further exacerbated by the increasing volume of waste received at the Indramayu landfill, which reached an average of 177.45 tons/day, requiring more sophisticated processing facilities to meet environmental standards (Dhamayanthie et al., 2021).

Further calculations presented in the 2024 TA-IDSRF report reveal that the current tariff structure is still far below the levels needed to achieve full-cost recovery. This gap not only leads to persistent fiscal deficits but also raises issues of fairness among different categories of waste sources. The following table compares existing tariffs with simulated ideal tariffs based on operational and investment costs:

Table 1
Comparison of Existing and Simulated Ideal Waste Fee Tariffs (OPEX + CAPEX)

Service Category	Existing Tariff (IDR/month)	Simulated Ideal Tariff (IDR/month)	Notes
Household Class 1 (450 VA)	3,000–4,000	7,000–8,000	Moderate increase needed
Household Class 2 (1300 VA)	5,000–6,000	9,100	Significant gap
Restaurant	10,000–15,000	23,500	Nearly double
Modern Retail Store	20,000–25,000	37,000	Highly disproportionate

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Traditional Market	15,000	28,000
Private Office	30,000	52,000
Clinic/Doctor's Practice	25,000	41,000
Budget Hotel	50,000	78,000

This table adapted from Waste Fee Update Report for Indramayu 2024 TA-IDSRF Regional 2. These discrepancies emphasize the need for policy intervention to redesign the tariff structure based on the principles of fairness and ability to pay. In addition, effective public communication strategies are necessary so that citizens understand that the revised fees are calculated fairly and reflect the actual cost of service provision (Linos et al., 2022).

More importantly, the current fees do not adequately represent actual cost structures—especially in the household, market, and public institution categories. Under the ideal fee model, middle-class households should be paying approximately IDR 9,100 per month; however, in reality, they are still charged between IDR 3,000 and IDR 5,000 depending on the service zone and user classification. This indicates that the principles of proportionality and effectiveness as mandated by Law No. 1 of 2022 on Intergovernmental Fiscal Relations (HKPD Law, Articles 2 and 23) have yet to be realized in practice.

Situating the Indramayu findings in the broader literature helps distinguish what is typical in local waste retribution systems and what is distinctive here. Across Indonesian cities, weak cost recovery and institutional fragmentation are recurring problems, but the Indramayu case also shows how newly enacted regulations (Perda No. 1/2024; Perbup No. 13 & No. 82/2024) and the mandated use of the MoHA No. 7/2021 tariff calculator create a rule-based opportunity for reform that earlier cases often lacked.

The fiscal imbalance is evident elsewhere. In Semarang, ineffective collection mechanisms left the city highly dependent on the regional budget despite rising service costs, as Jaya et al. (2022) observed. Indramayu faces the same budget strain, with revenue covering only about 14–20% of ideal needs. Yet, rather than simply pointing to under-collection, our study highlights the proximate causes: fragmented databases between DLH, UPTD, and Bapenda, combined with a flat tariff that undermines fairness across user categories. This provides sharper institutional and tariff-level levers than what Semarang's case revealed.

A similar regulatory–implementation gap is visible in Malang. Saraswati et al. (2023) describe how formal rules were enacted but failed to translate into practice due to limited facilities, human resources, and community awareness. Indramayu mirrors this "policy-on-paper" dynamic, but our evidence emphasizes a specific governance interface: without an integrated customer information system, neither billing nor performance feedback can function effectively. In this way, our analysis extends Malang's account by showing the institutional linkages where capacity must be stitched together.

Cilegon presents another angle. Previous studies note that limited coverage and weak oversight eroded system effectiveness there (Nurlaeli et al., 2025). Indramayu shares the demand-side symptoms—low willingness to pay rooted in perceptions of poor service quality—but the diagnosis goes further. By quantifying the gap between actual and ideal household tariffs (e.g., IDR 3,000–5,000 paid versus ~IDR 9,100

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calculated for middle-income households), the Indramayu case shows that compliance is tied not only to awareness but also to fairness and transparency in how fees are set and revenues are used.

Batang highlights collaboration as a principle. Gilang and Manar (2025) argue that multi-actor involvement is essential for sustainable fee systems. While this resonates with Indramayu's experience, our study translates collaboration into operational steps: database integration and revenue-sharing protocols between DLH, UPTD, and Bapenda, alongside staged tariff reforms tied to measurable service improvements. In this sense, Indramayu adds concreteness to the collaborative governance argument.

Taken together, the Indramayu case both aligns with and extends these prior findings. Where others emphasize fiscal burdens (Semarang), implementation slippage (Malang), limited coverage (Cilegon), or collaboration as principle (Batang), Indramayu offers an integrated and actionable framework. It combines (i) tariff recalibration using a nationally standardized cost calculator, (ii) inter-agency data and billing integration, and (iii) socially attuned communication and equity measures. This positions Indramayu not merely as another case of low cost recovery, but as a test bed for aligning fiscal, institutional, and social levers in a single reform package.

3.2 Governance Fragmentation and Weak Institutional Foundations

One of the main findings of this study highlights that despite the existence of a regulatory framework—namely Regional Regulation No. 1 of 2024 on Regional Taxes and Retributions, along with two Regent Regulations (No. 13 and No. 82 of 2024) regulating the operational procedures for collecting general service fees—the implementation of the waste service fee system in Indramayu Regency still faces significant challenges at the institutional and governance levels. The primary issue identified is the fragmentation of functions among agencies and the absence of a synergistic coordination system, particularly between technical service providers and regional revenue collectors.

Under the current institutional arrangement, the system is operated by the Environmental Agency (DLH) as the main technical unit responsible for service operations; the Waste Management UPTD, which executes daily technical activities across six service areas (Indramayu, Jatibarang, Karangampel, Losarang, Kandanghaur, and the Waste Management UPTD); and the Regional Revenue Agency (Bapenda), which holds the authority for fee collection and revenue recording. However, in practice, there is no integration protocol among these units to ensure data consistency, clear revenue targets, and performance-based evaluations.

One clear indicator of weak governance is the absence of an integrated customer information system, which has resulted in discrepancies between the number of customers served by DLH and the database of fee payers managed by Bapenda. For example, the 2024 retribution update report estimates a potential annual retribution of IDR 91.89 billion, with household waste alone accounting for IDR 79.95 billion. Yet, actual revenue realization only reached IDR 5.66 billion, with no structured mechanism in place to trace the sources of revenue leakage.

Moreover, technical reports also indicate that the operational capacity of the waste services remains very limited. As of 2024, there are only 12 operational TPS 3R units, a single recycling center, and only 8 active waste banks. Meanwhile, Indramayu generates around 1,099 tons of waste daily, with formal waste management coverage estimated at only 61.51%. This disparity not only reflects a lack of resources, but also a breakdown in planning mechanisms and burden distribution among service units.

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The absence of inter-unit oversight systems, the lack of internal performance contracts, and the underutilization of information technology further exacerbate the situation. Tariff estimates, retribution targets, and service realization figures cannot be systematically compared because each unit uses its own standards and tools. As a result, the retribution potential that could ideally match actual service needs remains under-mobilized.

The institutional governance weaknesses in Indramayu Regency are not merely administrative—they touch on structural deficiencies within the public service delivery system. Fragmentation between service providers and revenue collectors, the lack of integrated information systems, and the absence of cross-unit accountability standards are core issues contributing to fiscal inefficiency and poor service quality in the waste sector. Structural governance weaknesses in Indramayu have been identified in other sectors as well, highlighting the broader challenges of coordination and law enforcement within the local administration (Maulana et al., 2025). Institutional reform—especially through the development of vertical and horizontal integration among operational and fiscal units—is a fundamental requirement to strengthen a responsive, accountable, and sustainable retribution system. Evidence from coastal areas like Dadap Village also confirms that limited coordination and inadequate infrastructure significantly hinder community-level waste management efforts (Ibrahim et al., 2025).

3.3 Social Dynamics and Low Public Compliance

The institutional issues previously discussed have a direct and compounding effect on public compliance in paying waste management service fees. This phenomenon mirrors similar findings in Sidoarjo, where poor infrastructure, legal ambiguity, and weak public awareness significantly reduce the effectiveness of local waste regulations (Ambarsari & Sushanty, 2024). Analysis of retribution update documents and technical reports reveals that the participation level of the community—particularly households, which are the largest service users—remains very low and disproportionately misaligned with the service burden borne by the local government (Matheson, 2022).

According to the tariff calculation report, of the total annual retribution requirement of IDR 91.89 billion, more than 87% (IDR 79.95 billion) should ideally be contributed by households. However, based on the 2024 Budget Realization Report of the Environmental Agency (DLH), actual revenue only reached IDR 5.66 billion, with the largest share coming from commercial and institutional service users rather than households.

A primary factor driving low compliance is the misalignment between the financial contribution demanded and the public's perception of service quality received (Lamsal & Gupta). Many community members perceive the waste collection services as inconsistent, particularly in peripheral and densely populated areas, where there is limited public communication regarding service schedules, service types, and complaint channels. This is exacerbated by limited fleet and human resources, which often result in delayed, irregular, or even absent services in certain areas.

In addition, the tariff system in place tends to be inequitable and fails to reflect the principle of proportionality. Household retribution is set at a flat rate of IDR 3,000 per month, without differentiation based on socio-economic status, waste volume, or service level. Meanwhile, ideal cost estimates in the retribution update document suggest that a fair tariff for middle-income households should be IDR 9,100 per month.

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This disparity not only leads to fiscal losses but also erodes the perceived fairness and legitimacy of the policy among the public.

Behavioral analysis also indicates a broader problem: only 30.5% of residents dispose of waste in official bins for collection by waste workers, while 45.5% burn their waste, and 13% dispose of it illegally. This means that the majority of citizens have not yet internalized the official waste management system as part of their daily routines. It demonstrates that the obligation to pay retribution has not yet been socially embedded as a form of civic responsibility.

Another critical factor reinforcing public resistance is the lack of transparency in how retribution funds are managed. The public receives little to no information about how their payments are used—whether they are reinvested to improve services or absorbed into routine expenditures without direct feedback or return. There are no formal complaint mechanisms, no feedback forums, and very limited citizen involvement in policy evaluation, which leaves the public passive and increasingly skeptical toward the retribution system (Fox, 2022).

The low level of public compliance reflects not only deficiencies in communication and public education but also a systemic failure to establish retribution as a fair, transparent, and trustworthy reciprocal mechanism (Agu et al., 2024). Without reforms in tariff fairness, service quality improvement, and meaningful citizen engagement, the retribution system will continue to face stagnant revenue growth and persistent social resistance.

Taken together, these fiscal, institutional, and social dynamics extend the broader discussion of public service governance. The Indramayu case shows that fragmented databases, flat tariff structures, and weak communication strategies are not isolated issues, but mutually reinforcing factors that erode both fiscal sustainability and public trust. Theoretically, this underscores that local governance effectiveness depends on the integration of financial, institutional, and social levers, rather than treating them separately. Practically, the study contributes a replicable roadmap: recalibrating tariffs with the MoHA No. 7/2021 cost calculator, integrating inter-agency databases, and linking phased tariff reforms to visible service improvements. In this way, Indramayu is not merely another example of fiscal imbalance, but a model for aligning cost recovery, institutional accountability, and citizen compliance in sustainable public service governance.

3.4 Implementation Roadmap for Waste Fee Reform in Indramayu

Translating the fiscal, institutional, and social findings into practical reform requires a clear and staged roadmap. Several actors play central roles in this process. The Environmental Agency (DLH) is responsible for safeguarding service quality, while the Waste Management UPTD manages daily operations across service zones. The Regional Revenue Agency (Bapenda) oversees billing and revenue collection, with Bappeda and the DPRD providing planning, oversight, and budgetary approval. Community organizations are also essential for raising awareness and monitoring compliance.

The reform can be phased to ensure feasibility and legitimacy:

1) Short term (Year 1)
   Integrate customer and billing databases across DLH, UPTD, and Bapenda; pilot updated tariffs in selected service zones; conduct targeted public communication campaigns to build understanding of fairness and cost-recovery principles.
2) Medium term (Years 2–3)

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Scale up recalibrated tariffs district-wide; establish performance contracts across agencies; launch an online billing and complaint-handling platform to strengthen accountability.

3) Long term (Year 4 onward)
institutionalize periodic tariff reviews using the MoHA No. 7/2021 cost calculator; link improvements in service delivery—such as fleet expansion and TPS 3R facilities—directly to revenue growth and citizen satisfaction.

To support these phases, several policy instruments are essential, including the standardized waste fee calculator, inter-agency agreements for data integration, digitalized billing systems, and transparent public communication strategies. These instruments provide the technical and institutional foundation necessary to ensure that tariff reforms and service improvements are both credible and sustainable.

At the same time, the roadmap incorporates clear indicators of success across fiscal, institutional, and social dimensions. Fiscally, it targets improved cost recovery of at least 50 percent within three years. Institutionally, it prioritizes the establishment of an integrated customer database and consistent revenue realization. Socially, it seeks to foster higher household compliance and stronger perceptions of fairness and transparency. Together, these milestones ensure that Indramayu's case is positioned not merely as an example of fiscal imbalance, but as a model for aligning financial, institutional, and social levers in sustainable public service governance.

4. Conclusion

The waste management service retribution system in Indramayu Regency is already The waste management service retribution system in Indramayu Regency is supported by a relatively robust regulatory framework, namely Regional Regulation (Perda) No. 1 of 2024 and Regent Regulations (Perbup) No. 13 and No. 82 of 2024. These regulations demonstrate the local government's commitment to building a more accountable, transparent, and sustainable financing system for waste management services, in alignment with the mandates of Law No. 1 of 2022 and the principles of national fiscal policy.

However, this study finds that implementation on the ground continues to face several critical challenges. First, there is a substantial gap between the existing retribution tariff and the actual cost of waste management, with current revenue covering only 14–20% of real service needs. Second, weak inter-agency coordination, fragmented authority, and the suboptimal state of data and billing systems significantly hinder collection effectiveness. Third, community compliance remains low, influenced by negative perceptions of service quality and limited public understanding of the importance of civic fiscal contributions.

To overcome these challenges, strengthening the retribution system requires not only technical and fiscal adjustments but also institutional transformation and social approaches. In the short term, priorities include database integration across DLH, UPTD, and Bapenda, piloting revised tariffs, and launching public communication campaigns. Medium-term efforts should focus on broader tariff application, performance contracts, and digitalized billing systems. In the long term, periodic tariff reviews using the standardized MoHA No. 7/2021 cost calculator must be institutionalized, with service improvements tied to revenue growth and citizen trust.

This study concludes that the success of retribution reform in the waste sector depends on the synergy between regulation, fiscal capacity, institutional strength, and public participation. If managed effectively, the system can evolve from a source of fiscal imbalance into a legitimate and sustainable local revenue instrument, while also serving as a strategic pillar for just, transparent, and effective environmental governance.

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