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Regional-Owned Water Company Dilemma: Social and Business Function Disorientation

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Abstract**—***Regional-owned water companies (Perumda) in Indonesia face the dual challenge of fulfilling their social mission of providing affordable clean water while maintaining financial sustainability. This study investigates how Perumda T1 and Perumda T2 navigate these responsibilities, applying the Triple Bottom Line (TBL) framework to balance social, environmental, and economic dimensions. Using a mixed-methods approach, quantitative data, including Full Cost Recovery (FCR) ratios and customer satisfaction surveys, are combined with qualitative insights from stakeholder interviews and policy analysis. Results reveal that both Perumda struggle to achieve financial sustainability, as water rates often fail to cover operational and investment costs due to regulatory and social constraints. Perumda T1 prioritizes accessibility for low-income households, leading to financial losses, while T2 demonstrates comparatively stable profitability but faces challenges in expanding infrastructure to meet growing demand. The application of TBL principles underscores the need for integrated strategies that align financial goals with social equity and environmental stewardship. The study highlights the importance of supportive policies, adaptive rate-setting mechanisms, and public-private partnerships to ensure sustainable water management. These findings provide a roadmap for improving the operational effectiveness of regional water utilities, contributing to broader goals of sustainable development and equitable resource distribution.*

Keywords**—** *Regional-owned water company, sustainable water management, triple bottom line.*

I. INTRODUCTION

Ensuring access to clean drinking water is a key responsibility of local governments, as it is essential for meeting the basic needs of the population and supporting public health, quality of life, and overall welfare. As public service entities, regional-owned water companies (Perumda) are tasked not only with providing affordable drinking water but also with maintaining the viability of their operations as businesses. In practice, Perumda often faces a challenge in balancing its dual roles: fulfilling its social mission to prioritize public welfare, and fulfilling its business function to ensure financial sustainability and made contribution to local own source revenues (PAD). This creates a complex challenge when formulating water rate policies that are both fair and sustainable.

As public service providers, Perumda must also operate within a regulatory framework defined by the government. In Indonesia, the provision of drinking water by Perumda is governed by Law No. 23 of 2014 on Regional Government, which mandates that local governments must ensure access to safe drinking water as a fundamental right for all citizens. To further regulate water rates, Government Regulation No. 122 of 2015 on Drinking Water Provision sets out guidelines for the sustainable supply of water, while Ministerial Regulation No. 10/PRT/M/2018 on Drinking Water rates Guidelines offers detailed provisions on how rates should be set to reflect actual operational costs.

However, in practice, Perumda often faces difficulties in implementing these regulations, particularly when setting water rates that should achieve a balance between social and financial considerations. For instance, Perumda may be required to keep water rates low for low-income households and social needs, but at the same time, they must account for high operational costs, including infrastructure maintenance and development, to ensure both water quality and reliable distribution. This mismatch between water rates and actual costs can undermine the quality of service provided to the public.

Perumda T1 in C1 and Perumda T2 in C2 are examples of regional water companies facing these dilemmas. Both are responsible for providing drinking water in regions with diverse social and economic conditions. Regional Regulation No. 14 of 2014 in C1 mandates Perumda T1 to offer water at reasonable prices, while also considering the high operational costs associated with the large service area and challenging terrain. Similarly, Regional Regulation No. 5 of 2012 in C2 outlines similar requirements for Perumda T2, which faces rapid population growth and the ongoing need to enhance its water infrastructure in the future.

The Triple Bottom Line (TBL) theory, introduced by Elkington (1997), offers a useful framework to address this challenge. TBL emphasizes that the success of an organization should be evaluated not only by its financial performance (profit) but also by its social impact (people) and its environmental stewardship (planet). For Perumda, applying TBL principles means not just focusing on economic returns, but also considering the social needs of the community (such as providing affordable water) and ensuring the sustainable use of natural resources, particularly water, within the distribution process.

Applying TBL principles requires careful adjustments in water rates management, resource management, and operational strategies. Purnama and Wibowo (2018) found

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that many Perumda in Indonesia struggle to maintain a balance among these three elements, especially when setting water rates. While the rates are often kept low to meet the social needs of the community, this can create financial imbalances that jeopardize the long-term viability of Perumda operations. The process of determining water rates is a critical issue in balancing the social and business functions of Perumda. Government Regulation No. 122 of 2015 specifies that the water rates should cover both operational costs and long-term investment needs. However, in reality, many Perumda set rates lower than the actual cost of maintaining and improving water distribution systems that sometimes result to be loss for the company.

Several studies have explored the application of TBL principles in water supply management. Aldieri et al. (2018) found that water companies in Europe that embrace TBL tend to manage social, economic, and environmental sustainability more successfully in the long term. These companies are able to combine financial sustainability with the provision of affordable services and efficient, environmentally friendly water management. Similar findings were noted by Hedden et al. (2020), who demonstrated that TBL-based business models can enhance drinking water service quality, even though challenges in cost calculation remain.

This study aims to explore the implementation of the Triple Bottom Line framework in the rates -setting process for regional water companies in Indonesia, particularly in relation to balancing the social and financial objectives of Perumda while ensuring sustainable water resource management.

II. Literature Review And Hypothesis Development

This literature review explores prior research relevant to the study, which investigates how Regional Drinking Water Companies (Perumda) balance their social and business functions, and how the Triple Bottom Line (TBL) theory can explain the dynamics of water rates management in the context of sustainability and social justice. This review connects the identified problems to the theory of TBL and identifies existing research gaps in the studies on rates determination and drinking water management by regional water utilities (Perumda) in Indonesia.

Perumda as a Social and Business Entity

Perumda, as a regional public water company, holds two key mandates: first, to provide affordable and quality water for the public (social function), and second, to operate as a financially sustainable business (business function). These two functions are often in conflict because the social function, which prioritizes public service with affordable pricing, often does not generate sufficient revenue to cover operational and infrastructure maintenance costs.

Research by Purnama and Wibowo (2018) on water rates evaluation in Perumda (Regional-owned Water Company) Bandung concluded that although Perumda must set affordable rates for the community, they often struggle to balance operational costs with the rates they set. Yuliana (2020)'s study on Perumda in Bandung shows that the costs of water provision tend to rise over time, while the rates set by local governments often do not reflect actual costs, which can jeopardize the sustainability of these companies.

These studies highlight the dilemma Perumda faces in balancing their social obligations to provide affordable water while ensuring the company remains financially viable. Therefore, it is essential to explore how the TBL theory can offer a more holistic framework to manage these two functions effectively.

Application of the Triple Bottom Line (TBL) Theory

The Triple Bottom Line (TBL) theory posits that a company's performance should be measured not only in terms of profit but also by its social (people) and environmental (planet) impact (Elkington, 1997). This theory is particularly relevant to Perumda because they do not only operate with the goal of profit generation but also have responsibilities toward ensuring equitable access to clean water for all levels of society and sustainable management of water resources.

Research by Aldieri et al. (2018) on water management in Europe shows that adopting TBL can help water companies manage these three dimensions in a more balanced manner. In the case of Perumda, applying TBL would allow the company to focus not only on profitability but also on ensuring social access to clean water and managing the sustainability of water resources. TBL also offers clear guidelines for setting rates that are not only cost-recovery-based but also account for social justice and environmental responsibility. However, despite TBL's theoretical advantages, its application in Indonesia remains limited. Purnama and Wibowo (2018) highlight that while TBL could help balance these dimensions, many Perumda in Indonesia have yet to fully integrate social and environmental considerations into their rates calculations and overall management practices.

Research Gap

Based on the literature review, several research gaps emerge that need further exploration: (1) Limited application of the TBL theory in the management of Perumda in Indonesia: While TBL provides a comprehensive framework for balancing social, environmental, and economic factors, there is a lack of in-depth studies on its application in the drinking water sector in Indonesia, particularly for regional-owned water companies (Perumda). Most studies only focus primarily on profitability and financial sustainability, with insufficient attention given to how social and environmental aspects are integrated into decision making of Perumda. (2) Inadequate alignment of the rates with sustainability principles: Many studies show a misalignment between the rates set by Perumda and the actual production costs, as well as a lack of consideration for social justice in rates of determination. More research is needed to explore how Perumda, especially in areas with significant social disparities, can integrate social equity into decision making policy processes. (3) Contextual application of TBL in local settings: While much research addresses water management at a national or international level, there is limited research focusing on local contexts in Indonesia, especially regarding the challenges faced by Perumda in some regions. This study

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aims to fill this gap by examining case studies of Perumda in C1 and C2 and exploring how TBL principles are applied in their focus orientation between social and bussiness function and water management practices.

III. METHODS

The study employs a mixed-methods approach to explore how regional water companies (Perumda) in Indonesia balance their social and business functions while applying the Triple Bottom Line (TBL) framework. This approach combines quantitative data analysis to measure operational performance with qualitative insights to understand the underlying dynamics of decision-making, challenges, and stakeholder perceptions (Creswell & Creswell, 2018). By integrating these two approaches, the research aims to provide a comprehensive understanding of how TBL principles are applied in the rates-setting process and overall water management strategies.

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The quantitative findings (e.g., FCR ratios, customer satisfaction scores) provide objective data on how Perumda are performing in terms of financial viability and service delivery. However, the qualitative data adds context by explaining the why behind these numbers. For example, while T1 may show a lower FCR ratio, qualitative insights reveal that this is due to a deliberate strategy to prioritize affordable rates for low-income households, even at the cost of financial sustainability. Similarly, customer satisfaction data might show lower satisfaction with water quality; qualitative interviews can reveal that this is linked to challenges in infrastructure and resource management.

By integrating both sets of data, the study provide a holistic view of the challenges and strategies Perumda use to meet the expectations of financial viability, social responsibility, and environmental stewardship. This allows for a nuanced understanding of how TBL principles are practically applied in the rates-setting process and operational decision-making, revealing the tensions between fulfilling regulatory requirements, achieving profitability, and maintaining social equity.

In addition, this study also conducted interviews with Perumda management and Accounting as a form of source triangulation regarding to get confirmation and in-depth meaning. The following is a detailed list of informants in this study:

TABLE 1. List of Informants

No	Informant Code	Position	Company
1.	Informant 1	Management	Perumda T1
2.	Informant 2	Accountant	Perumda T1
3.	Informant 3	Management	Perumda T2
4.	Informant 4	Accountant	Perumda T2

Source: Informant data, 2024

IV. RESULT AND DISCUSSION

Analysis of Government Regulatory Mandate and Policy

The Universal Declaration of Human Rights asserts that every individual possesses inherent rights that must be respected, protected, and fulfilled by the state. The right to water is recognized as part of human rights, as outlined in Article 11, Paragraph (1) of the International Covenant on Economic, Social, and Cultural Rights, which states that everyone is entitled to an adequate standard of living, including access to food, clothing, and adequate housing (UN General Assembly, 1966). Water is a critical necessity for survival and, therefore, is inherently included as a human right. On July 28, 2010, the United Nations General Assembly adopted Resolution No. 64/292, recognizing the human right to safe and clean drinking water (UNGA, 2010). This resolution calls upon countries and international organizations to enhance their capacity and facilitate the transfer of technology to ensure the provision of safe, accessible, and affordable drinking water for all, particularly in developing countries (Gleick, 2013; Bakker, 2010). These efforts aim to support the achievement of sustainable development goals and ensure the realization of the human right to clean water.

Article 33 of the 1945 Indonesian Constitution states that "The land, water, and natural resources contained therein shall be controlled by the state and utilized for the greatest welfare of the people." This mandate underscores the critical role of the government in ensuring that water resources are used for public benefit. Referring to the Public Policy and Management theory of Osborne and Gaebler (1992), public enterprises such as Regional Drinking Water Companies (Perumda) are designed to promote societal welfare through policies that provide essential services at affordable prices (Osborne & Gaebler, 1992). If regulations prioritize universal access to clean water, this signifies the prominent social function of Perumda in serving the public interest (Budiyanto & Prabowo, 2015).

One of the key legal frameworks governing water resources in Indonesia is Law Number 17 of 2019 on Water Resources, which replaced Law Number 7 of 2004. This change was implemented because the previous law was deemed to allow opportunities for the privatization and commercialization of water resources by private entities, which was considered detrimental to society as the end-users (Suharyo et al., 2019). Law No. 17 of 2019 establishes a strong foundation affirming that access to water is a human right that must be guaranteed by the state. Article 6, Paragraph (1) emphasizes that the state is obliged to fulfill the basic needs of society for water, encompassing consumption, hygiene, and health uses. Additionally, Article 8 reinforces that citizens' right to water for essential needs must be prioritized by both central and regional governments (Suyanto,

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2020). The government is responsible for managing water resources fairly and sustainably, with a particular focus on their social function, ensuring adequate access to clean water for every individual, including those in remote or underserved areas (Setiawan & Permadi, 2021).

Meanwhile, Government Regulation Number 121 of 2015 on Water Resource Utilization still provides opportunities for private enterprises to be involved in water resource management. Permits for such utilization are granted by the government to permit holders to manage water resources according to predetermined allocations. The private sector can play a role in the provision of Drinking Water Systems (SPAM) through partnerships with Regional-Owned Enterprises (BUMD), Village-Owned Enterprises, cooperatives, or individuals. However, priority remains with BUMD and regional governments to ensure that access to clean water continues to be an inclusive and sustainable service.

Government Regulation Number 122 of 2015 on the Provision of Drinking Water Systems (SPAM) emphasizes that both central and regional governments share responsibility for developing a safe, high-quality, and sustainable drinking water system. Article 2 specifies that the government is responsible for creating infrastructure and systems that meet safety and health standards. Article 9 underscores that water provision must cover all communities, including those in areas with limited infrastructure or from economically disadvantaged groups. In this context, Perumda, as a Regional-Owned Enterprise (BUMD), is expected to play a critical role in ensuring that clean water remains a fundamental service accessible to all segments of society.

Regional government policies in Kabupaten C1 and C2 also support the fulfillment of citizens' rights to clean water through regulations focused on improving water service delivery and management. In Kabupaten C1, Regional Regulation Number 4 of 2020 governs the transformation of the Regional-owned Water Company (Perumda) T1 into a Regional Public Company (Perumda) T1. This change aims to enhance performance and service delivery in providing clean water to the community, ensuring continuous improvement and expansion of access to clean water. Additionally, Regional Regulation Number 3 of 2014 stipulates regional capital investment into Perumda T1, demonstrating the regional government's commitment to supporting operational and developmental aspects of clean water services for its residents.

Meanwhile, in C2, Regional Regulation Number 2 of 2009 governs the establishment of the Regional Owned Water Company (Perumda) T2. The primary goal of this regulation is to meet the need for clean water and drinking water for the residents of C2, ensuring that the community enjoys improved and high-quality water services. Through this policy, the regional government demonstrates its commitment to supporting the community's right to clean water, while also enhancing service delivery in a more efficient and inclusive manner within their respective regions.

However, implementation on the ground is far from simple. Perumda often face various challenges, including limited capital, insufficient regional government support, high water leakage rates, extensive service coverage areas, and other issues that require balancing their social and profit functions. One potential solution is forming partnerships with the private sector through schemes such as Build, Operate, Transfer (BOT) or Operation and Maintenance (OM). Nevertheless, private sector involvement frequently raises concerns about potentially diminishing the social function of Perumda, as profit-oriented motives may lead to increased water rates, ultimately risking reduced access to clean water services for low-income communities.

V. Triple Bottom Line Analysis

The Triple Bottom Line (TBL) analysis is a framework that evaluates an organization's performance across three dimensions: social, environmental, and financial. For entities like Perumda, this approach assesses service coverage and quality (social indicators), resource efficiency and sustainability (environmental indicators), and financial health, including profit/loss and Full Cost Recovery (FCR) (financial indicators). Implementing TBL enables Perumda to balance its social mission with environmental stewardship and financial viability, promoting sustainable development. This methodology aligns with the principles outlined by Elkington (1997) in "Cannibals with Forks: The Triple Bottom Line of 21st Century Business.).

The social and Environemt performance indicators for both Perumda demonstrate a strong commitment to providing essential water services and sustainability. While Perumda T1 faces challenges in achieving broad coverage and higher customer satisfaction levels, it actively works to maintain water quality and support low-income households through variable rates. Conversely, Perumda T2 shows better service coverage and financial stability, though customer perceptions of water quality and responsiveness vary. The provision of water rates subsidies indicates a shared goal of ensuring equitable access to water services while striving for continuous improvement in operational efficiency and service quality.

Financial indicator Analysis

The financial indicator analysis focuses on assessing the profitability levels of Perumda, examining their ability to generate profit while maintaining operational efficiency. This involves evaluating their Full Cost Recovery (FCR) ratio, which measures whether revenue generated is sufficient to cover operational, maintenance, and investment costs. An FCR value below 1 indicates a financial deficit, suggesting that the Perumda relies on external funding or government support. Conversely, an FCR above 1 demonstrates financial sustainability and operational efficiency, with surplus funds available for reinvestment or service improvements. This analysis highlights the balance Perumda must achieve between financial viability and fulfilling their social mission.

Muhammad Abadan Syakura, Ibnu Abni Lahaya, and Muhammad Harits Zidni Khatib Ramadhani, “Regional-Owned Water Company Dilemma: Social and Business Function Disorientation,” *International Journal of Multidisciplinary Research and Publications (IJMRAP)*, Volume 7, Issue 6, pp. 120-126, 2024.

TABLE 2. Social and Environment analysis

Social and Environment performance Indicators	Perumda T1 (C1)	Perumda T2 (C2)
Service Coverage	Covers 39.07% of the total population (312,906 people out of 800,939) in urban and rural areas	Covers 41.41% of the total population (177,722 people from a base of 73,586)
Water Quality	58.9% of surveyed customers reported no distinct taste; 73.1% stated water was odorless. Quality is tested regularly as per national health standards, with an internal laboratory for contaminants testing	Mixed feedback: 46.80% neutral on water clarity, 21.23% dissatisfied, 20.97% satisfied. Odor feedback: 57.54% neutral, 16.37% dissatisfied. Water flow: 30% neutral, 29.16% dissatisfied, 21.99% satisfied
Customer Satisfaction	84.9% satisfied with customer registration services; 62% satisfied with the provision of clean water (2023 survey)	53.45% neutral on data processing ease, 32.74% satisfied. Ease of payment: 47% neutral, 34.02% satisfied. Meter reading accuracy: 51.66% neutral, 37.85% satisfied. Responsiveness to complaints about water odor: 54.73% neutral, 27.37% satisfied. Handling complaints: 47.57% neutral, 25.06% satisfied. Courtesy and friendliness: 46.55% neutral, 36.31% satisfied
Empowerment of Low-Income Households	Offers variable rates for low-income households	Provides rates subsidies for low-income households
Water Source Management	Implements measures to protect water sources from pollution and over-extraction, with conservation initiatives	Undertakes water resource protection, including monitoring and conservation programs
Energy Efficiency	Uses energy-saving equipment in water treatment and distribution processes to minimize energy consumption	Invests in energy-efficient water pumps and treatment systems to lower energy use
Leakage Reduction Programs (NRW)	Works to reduce water leakage through maintenance and infrastructure upgrades	N/A

For example, Perumda T1 must account for the significant distribution costs in C1, which has a vast and geographically diverse area. In addition to rising operational costs, the company faces challenges such as water losses due to leaking or damaged distribution pipes, malfunctioning master meters at water treatment plants, and outdated customer meters that need replacing. In 2021, water loss reached 39.6% of the total distributed water. If these issues persist, they will likely increase financial losses for Perumda T1. Perumda T2 in C2 also faces similar challenges with a growing population and the need to expand its production capacity. Yuliana (2020) highlights that despite regulatory frameworks, social and political pressures often compel Perumda to lower water rates could potentially compromising service quality.

The Full Cost Recovery (FCR) level is an indicator used to measure a company's ability to cover all operational, maintenance, and investment costs from its generated revenue. If a company's FCR level, such as that of Perumda T1, is only 88.2%, it indicates that the company has not yet fully covered all of its expenses through its revenue. Perumda Perumda T1 in C1 and Perumda T2 in C2 focus on social performance indicators that reflect their service to the community. In terms of service coverage, Perumda T1 serves 39.07% of the total population or approximately 312,906 people out of 800,939 in urban and some rural areas. Meanwhile, Perumda T2 has a slightly higher coverage rate, serving 41.41% or about 177,722 people. Although both Perumda demonstrate efforts to expand access to clean water, they still face challenges in reaching the entire population.

TABLE 3. Profit/loss Realization 2020-2023

Perumda	Profit/ Loss (Rp)			
	2020	2021	2022	2023
T1	1.132.315.590,00	-1.874.323.012,00	-6.180.685.087,00	-7.958.249.323,00
T2	1,197,147,884.00	2,370,055,137.00	480,646,120.00	966,351,816.00

In 2020, this Perumda recorded a profit of IDR 1,132,315,590. However, from 2021 to 2023, its financial performance showed significant losses, with the amount of losses increasing each year. In 2021, the losses amounted to IDR -1,874,323,012, which escalated drastically to IDR -6,180,685,087 in 2022 and reached IDR -7,958,249,323 in 2023. This trend indicates that Perumda T1 faces challenges in maintaining its profitability and is likely focusing more on fulfilling its social function, such as expanding access to clean water and ensuring community service, even at the expense of its financial health. These losses could be attributed to various factors, such as high operational costs, subsidies for low-income communities, and infrastructure investment needs.

In contrast, Perumda T2 demonstrates a more stable trend compared to T1, with relatively better profitability. In 2020, it recorded a profit of IDR 1,197,147,884, which significantly increased to IDR 2,370,055,137 in 2021. Although profits declined in 2022 to IDR 480,646,120, its financial performance improved again in 2023 with a profit of IDR 966,351,816.

This data suggests that Perumda T2 has been able to strike a balance between its social mission and profitability. The stable profits indicate that this Perumda can conduct its operations with a more sustainable approach, possibly through better operational efficiency or more effective rates policies. To gain a deeper understanding of the challenges and strategies adopted by these Perumda, insights from key

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informants shed light on their operational realities, financial struggles, and efforts to maintain service quality for their communities.

Informant 1 – Perumda T1:

"*Currently, the* Perumda *is consistently incurring losses as we have recently initiated a water rates adjustment that will be implemented gradually starting next year. There are also operational burdens such as fluctuating and generally increasing prices of chemical raw materials and significant asset overheads. This is why we are working to reduce costs by attempting to lower the NRW (Non-Revenue Water) from 39% to 36%. However, reducing NRW remains a major task as it requires substantial funding for its implementation. The regional government has injected capital of IDR 1.6 trillion, of which around IDR 225 billion has already been received. We have also received asset grants from the Ministry of Public Works through the Regional Financial and Asset Management Agency (BPKAD) to the* Perumda."

Informant 3 – Perumda T2:

"*In the last five years,* Perumda *T2 has shown relatively stable profitability, despite a decline in 2022. Factors such as rising operational costs or investment needs may have contributed to this decline. However, overall, financial performance has improved through various efficiency and improvement efforts*."

TABLE 4. FCR, Rates, And Cost of Water Production Perumda in 2023

Perumda	Average rates (M3)	Cost Of Production (M3)	FCR (%)
T1	4419	5005	0,88
T2	4,875	5332	0,91

With an FCR (Full Cost Recovery) rate of 0.88, Perumda T1 has not yet been able to cover all its operational and investment costs from its revenue. This figure indicates that its income only covers 88% of total expenses. This situation reflects a greater focus on its social function, such as expanding access to clean water for the community, even though it is financially operating at a deficit. This suggests that Perumda T1 may need to rely on subsidies from the regional government or other external funding sources to bridge the financial gap, posing challenges to achieving sustainable operations.

Perumda T2 in C2 has an FCR (Full Cost Recovery) value of 0.91, which is slightly better than Perumda T1's FCR of 0.88. This indicates that Perumda T2 is closer to covering its total operational, maintenance, and investment costs from its revenue compared to Perumda T1. While both are still below the threshold of full cost recovery (an FCR of 1 or higher), Perumda T2 demonstrates a marginally stronger financial position in this regard.

To better understand the specific challenges and approaches employed by each Perumda in balancing their social and financial objectives, perspectives from key informants offer valuable insights into their operational strategies and financial realities.

Informant 2 – Perumda T1:

"*Since* Perumda *has a higher social function compared to other Regional-Owned Enterprises (BUMD), there is no regulation requiring it to remit profits to the regional government. However, according to Regional Regulation No. 4, if service coverage reaches 80%, then profits can be shared with the regional government based on assessment. Currently, the applied* rates *are still below the FCR level, but moving forward, we aim to adjust the rates while still considering the condition of the community*."

Informant 4 – Perumda T2:

"*Yes, there are regulations requiring BUMD, including* Perumda*, to remit a portion of their profits to the regional government each year. This is usually stipulated in regional regulations or provisions set by the provincial government. The purpose, of course, is to contribute to increasing regional revenue. So, as a BUMD,* Perumda *is responsible not only for service delivery but also for contributing to regional finances from its profits. Typically, the amount or percentage of profit remittance is determined by a governor's decree or regional regulation governing BUMD. Therefore, there is a mandatory contribution to the regional government from net profits earned. Regarding our FCR, while we are approaching the FCR value, it is still below 1, and in the future, we plan to adjust rates, as it has been a while since the last adjustment, with hopes to exceed the FCR level."*

VI. Conclusion

Perumda s such as T1 and T2 demonstrate the challenges and responsibilities inherent in balancing both of social and profit functions. While both entities strive to provide accessible, affordable, and high-quality water services to their communities, financial sustainability remains a critical issue. Perumda T2, with a slightly higher FCR, indicates relatively better financial efficiency compared to T1, which struggles to fully recover costs from its revenue. Both Perumda exemplify the need for effective policies, local government support, potential rates adjustments, and strategic partnerships to enhance operational efficiency and ensure long-term service sustainability. Achieving this balance is essential to maintaining their mission as public service providers while ensuring financial viability for infrastructure and service improvements that eventually made contribution to local-owned source revenue in the future.

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