

IMPLEMENTATION OF THE 2023 DRINKING WATER GRANT PROGRAM BY PERUMDA TIRTANADI IN PATUMBAK VILLAGE, KAMPUNG PATUMBAK DISTRICT, DELI SERDANG REGENCY

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ABSTRACT

This study evaluates the implementation of the 2023 Drinking Water Grant Program by Perumda Tirtanadi in Patumbak Kampung Village, Patumbak Sub-district, Deli Serdang Regency. Using a qualitative descriptive approach, data were obtained through in-depth interviews with seven key informants and supporting documentation. Guided by Charles O. Jones's (1996) policy implementation model—organization, interpretation, and application the study identifies both the success and inhibiting factors in the program execution. The results show that the program was generally implemented successfully, achieving the target of 38 household connections (SR). Organizational coordination among Perumda Tirtanadi, the Ministry of PUPR, Ministry of Finance, BPKP, Inspectorate, Bappeda, local government, and village authorities functioned effectively. However, implementation was hindered by limited field technical personnel serving seven regencies/cities, leading to delays. Interpretation efforts through socialization were conducted well, although some residents still misunderstood program criteria. In the application stage, verified household connections significantly improved access to safe water, reduced waterborne diseases, and lowered household expenses. Inhibiting factors included unclear program criteria, limited resources, administrative constraints, and coordination gaps. Success factors involved clear standards, adequate resources, effective communication, community participation, and continuous monitoring. The study recommends strengthening socialization, increasing technical personnel, improving coordination, simplifying administration, and enhancing post-installation monitoring to ensure sustainability.

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INTRODUCTIONS

Water is a gift of God Almighty and a basic need for all mankind, as well as an important part of natural resources and ecosystems (Kodoatie, 2002). In accordance with Article 33 paragraph (3) of the 1945 Constitution,

water resources are controlled by the state for the greatest possible prosperity of the people in a fair manner, guaranteeing everyone's right to water for daily needs, with regulation by the Central and Regional Governments. Internationally, access to water and sanitation has been recognized by the United Nations (UN) as a fundamental human right for health and well-being, this is regulated through UN Resolution A/RES/64/292 of 2010.

WHO and UNICEF data (2021) show that 2 billion people use safely managed water, but 3.6 billion still lack safely managed sanitation. The WHO sets per capita drinking water consumption at around 2 liters per day for adults, with variations in climate and activity. WHO refers to drinking water quality guidelines by looking at aspects of needs such as household, drinking water, preparing food and hygiene. However, around 771 million people in the world still lack access to safe drinking water, with significant gaps between developed and developing countries and between urban and rural areas (JMP, 2021).

According to the WHO/UNICEF Joint Monitoring Programme (JMP), improved drinking water sources include pipeline (household tap water, *public paste stand*) and non-pipeline (borewells, protected springs, rainwater, bottled water). Access to quality drinking water is essential for sustainable development, maintaining health, improving quality of life, and supporting economic growth. Adequate access reduces the spread of disease, increases productivity, and social progress.

In Indonesia, the Regulation of the Minister of Health Number 492/MENKES/PER/IV/2010 stipulates that proper and safe drinking water must meet physical, chemical, and microbiological standards. Drinking water supervision is also regulated in Permenkes Number 736/MENKES/PER/VI/2010 which regulates external supervision by service providers, both piping and non-piping networks, as well as internal supervision so that water distribution is easily accessible to the public.

Thus, safe and decent drinking water is a basic right protected by the constitution and international law, but major challenges remain in providing equitable and quality access, especially for low-income communities and in rural areas. National and international policies and regulations seek to ensure the availability and management of safe drinking water as part of sustainable development and improvement of people's welfare.

Various efforts have been made to improve access to drinking water, especially for low-income communities. One of the acceleration efforts is carried out through the drinking water grant program. This program is an assistance from the Central Government to encourage Regional Governments to increase access to piped drinking water to the community. The purpose of this program is to provide financial and technical support to Regional Governments in order to expand the scope of piped drinking water services and increase the number of New Connections (SR), especially for MBR (Bappenas, 2023).

The Drinking Water Grant Program is carried out by optimizing *idle capacity* which is carried out through the implementation of *output-based* performance or based on measurable and verified performance. This approach means that the Regional Government carries out the development and services of drinking water first, while the disbursement of grant funds can only be carried out after the community receives services that meet the requirements and standards of guidelines that have been set. Thus, this program is expected to encourage Regional Governments to be more proactive in increasing access to drinking water for the community. In addition, this program is also expected to increase the efficiency and effectiveness of drinking water resource management.

Through the *output-based approach*, the Regional Government is required to increase access to decent drinking water which is financed in advance through Regional Government Capital Participation (PMP) to the Drinking Water BUMD as the Regional Government operator and allocate funds in the Regional Government budget for the current year. Programs with such a *breakthrough output-base approach* are very good, according to researchers, because they will encourage local governments to maximize the program, in order to get reimbursement for all costs that have been disbursed previously (Bappenas, 2022).

With the aim of achieving 100% access to safe drinking water by 2024, the North Sumatra Provincial Government through Perumda Tirtanadi has implemented the Rural and Urban Drinking Water Grant Program in 7 Regencies/Cities, namely Medan City, Padangsidempuan City, Deli Serdang Regency, Toba Regency, Central Tapanuli Regency, South Tapanuli and North Padang Lawas with a total of 1,778 house connections.

The Deli Serdang Regency Government collects data for Low-Income People (MBR). From the data collection spread across several sub-districts with initially verified House Connections (SR), 643 SRs were initially verified, but

those that were appropriate and approved according to APIP and BPKP verification were 571 House Connections (SR) installed and spread across several sub-districts. The number of final baseline in Deli Serdang Regency of 643 SRs and 72 SRs is not in accordance with the results of the conformity of verification carried out by APIP and BPKP Number 400.9.14.6/3387/ITPROVSU dated November 22, 2023 and followed up by a Review Report on APIP Verification in the implementation of the Urban Drinking Water Grant Program for the 2023 Fiscal Year (Number PE-12.03/LHP-886/PW02/4.2/2023 dated November 30, 2023) (Tirtanadi, 2023).

The main problems that arise in the implementation of this grant program include organizational aspects, policy interpretation, technical implementation applications, and inhibiting factors related to field technical, social community, and financial administration. The following discussion will comprehensively describe these problems based on the results of research and analysis that has been carried out.

Organizations as policy implementers have a central role in translating policies into real actions in the field (Jones, 1996). In the context of the Drinking Water Grant Program in Patumbak Kampung Village, Perumda Tirtanadi functions as the main coordinator of technical implementation with the support of various agencies such as the Ministry of Public Works and Housing, the Ministry of Finance, BPKP, the North Sumatra Provincial Inspectorate, and the North Sumatra Provincial Bappeda (Perumda Tirtanadi, 2023).

Although the organizational structure has been established and SOPs have been established to ensure the accuracy of targets, quality of work, transparency, and accountability, there are obstacles in the form of limited human resources, especially field technical personnel. Perumda Tirtanadi technical personnel had to divide their time and capacity to serve seven districts/cities simultaneously, causing delays in implementation at several points, including Patumbak Kampung Village (Perumda Tirtanadi, 2023; interview of the Head of the Transmission and Distribution Division, 2025). In addition, coordination between the institutions involved, although it is going well, still needs to be strengthened so that there is no overlap of tasks and increase the effectiveness of program implementation. This is important considering that the implementation of the program requires strong cross-sector synergy.

Policy interpretation is an important stage to describe policies that are general in nature into operational ones that can be implemented (Jones, 1996). Perumda Tirtanadi has carried out intensive socialization to the people of Patumbak Kampung Village through meetings with village officials, distribution of leaflets, and direct socialization during surveys and before the installation of house connections (SR) (Perumda Tirtanadi, 2023).

The research *gap* in this study shows that there is still a lack of research on the implementation of drinking water grant programs in specific local contexts. Previous research has discussed the effectiveness and results of drinking water grant programs in general in various regions such as Malang City (Rahmawati et al., 2024), Banyumas Regency (Alamsyah, 2024), and West Kutai Regency (Amazia & Amin, 2024). However, research that specifically examines the implementation of the drinking water grant program policy with a theoretical approach to policy implementation and focuses on organizational, interpretation, and application aspects at the village/sub-district level, especially in Patumbak Kampung Village, is still very limited. This study fills this gap by examining in depth the implementation of the drinking water grant program in Patumbak Kampung Village using the policy implementation model of Charles O. Jones (1996), which has not been widely applied in similar studies in Indonesia. Previous studies tend to focus on program effectiveness or customer satisfaction (e.g., Syukri, 2019; Rahmawati et al., 2024) without systematically integrating the three main components of policy implementation: organization, interpretation, and application.

Starting from the above background, to make the problem more systematic, a problem formulation was made which at the same time became a limitation in the discussion of the thesis, so the research problem was formulated as follows:

1. How is the implementation of the 2023 Drinking Water Grant Program by Perumda Tirtanadi in Patumbak Village, Patumbak Village, Patumbak District, Deli Serdang Regency?
2. What are the factors that are obstacles in the implementation of the 2023 Drinking Water Grant Program by Perumda Tirtanadi in Patumbak Village, Kampung Patumbak District, Deli Serdang Regency?

METHOD

Research is a process of systematically looking for something in a certain period of time using scientific methods based on certain rules. This study aims to analyze the objective picture that occurred regarding the Implementation of the 2023 Water Grant Program in Patumbak Village, Kampung Patumbak District, Deli Serdang Regency. In accordance with the goals to be achieved, the author uses a type of descriptive (qualitative) research.

This research was conducted in Deli Serdang Regency, precisely in Patumbak Kampung Village, Patumbak District. Patumbak District has 8 villages, namely: Patumbak Kampung, Patumbak Dua, Lantasan Baru, Patumbak Satu, Marindal Satu, Marindal Dua, Sigara Gara and Tembasan Lama. Of the 8 villages that received benefits, only in Patumbak Village Village.

This study uses a combination of primary and secondary data collection techniques to obtain comprehensive and relevant information to the research objectives. The appropriate data analysis method to answer this research problem is to use the Miles and Huberman model analysis. This model is used for qualitative research. In the process of data analysis, according to Hardani et al. (2020), it was revealed that Miles and Huberman divided into three flows of activities that occurred simultaneously, namely (1) data *reduction*; (2) data display; and (3) conclusion draw.

Miles and Huberman (in Hardani et al., 2020) further explained that data reduction is defined as the selection process, focusing on simplification, abstraction, and transformation of data that emerges from field records. Then, what is meant by the presentation of data is a set of structured information that gives the possibility of drawing conclusions. In qualitative research, data presentation can be done in the form of brief descriptions, charts, relationships between categories, *flowcards* and the like. Meanwhile, the conclusion is a new finding that has never existed before. Findings can be in the form of a description or description of an object that was previously dimly lit or dark so that after research it becomes clear, it can be in the form of causal or interactive relationships, hypotheses or theories.

RESULT AND DISCUSSIONS

Results

Implementation of the Drinking Water Grant Program

Policy implementation is a crucial stage in the public policy cycle that connects policy formulation with realization on the ground. In the framework of Charles O. Jones' (1996) theory, the application or application aspect is a phase in which policies that have been organized and interpreted are applied concretely in the field. This application aspect includes service providers, outcomes, and impacts of the program implemented. In the Drinking Water Grant Program by Perumda Tirtanadi in Patumbak Village Village, these three dimensions are the main indicators of the success of policy implementation. The following discussion elaborates in depth on the application aspects by referring to policy implementation theory, previous research studies, and interviews with key informants involved in this program.

Service providers in the context of policy implementation are organizations or institutions that are directly responsible for the technical implementation of programs in the field. Jones (1996) emphasized that the implementing organization is not just an administrative tool, but a social system that must be able to manage resources, bridge the interests of various actors, and provide feedback for policy improvement. In the Drinking Water Grant Program in Patumbak Kampung Village, Perumda Tirtanadi plays the role of the main service provider that coordinates all technical processes starting from the installation of house connections (SR), the management of the water distribution network, to supervision and reporting.

Perumda Tirtanadi's organizational structure, which consists of the president director, planning director, administrative director, and operations director, as well as technical and administrative divisions, provides a framework that supports the implementation of the program in a professional and structured manner (Perumda Tirtanadi, 2023). The Head of the Transmission and Distribution Division of Perumda Tirtanadi, Mr. Dedi Gusman, stated that Perumda Tirtanadi carried out the function of providing services optimally, despite challenges such as limited field technical personnel who had to serve seven districts/cities simultaneously (Interview, April 17, 2025). This emphasizes the importance of adequate organizational capacity and human resources as determining factors for successful implementation (Jones, 1978; Hill & Hupe, 2009). Research by Alamsyah (2024) in Banyumas Regency

and research by Delvira Permata Sari & Ananta Prathama (2023) in Ngawi Regency also corroborate that the success of service providers is highly dependent on the quality of human resources and coordination between implementing agencies.

Results are a direct product of program implementation that can be measured and observed as an indicator of the success of policy implementation (Sabatier & Mazmanian, 1980). In the Perumda Tirtanadi Drinking Water Grant Program in Patumbak Kampung Village, the main result achieved was the installation of 38 drinking water house connections (SR) according to the set target. All of these SRs have gone through a verification process by the Financial and Development Supervisory Agency (BPKP) and the technical team as eligible to receive grants (Perumda Tirtanadi, 2023). Implementation and financial reports have been submitted transparently to the Ministry of Finance, as well as the local community is actively involved in socialization and supervision of program implementation.

The Head of Patumbak Sub-district, Mr. Muhammad Kennedy, emphasized that the SR installation target has been fully achieved and has been verified directly by the sub-district team (Interview, April 22, 2025). The Head of Patumbak Village and the Head of Hamlet also said that the community felt the real benefits of this program, with clean water flowing smoothly and satisfactory service (Interview, April 22 & 30, 2025). Previous research studies such as by Rahmawati et al. (2024) and Yismaya Amazia & Muhammad Djamal Amin (2024) also show that the success of outcomes is strongly related to the accuracy of targets, the quality of technical implementation, and community participation. However, technical obstacles such as rocky soil conditions and limited technical personnel are factors that need to be considered to increase the effectiveness of implementation.

Impacts are medium- and long-term changes that occur as a result of program implementation, both in social, economic, health, and environmental aspects of the community (Goggin et al., 1990). The Drinking Water Grant Program in Patumbak Kampung Village has had a significant positive impact. In terms of physical and infrastructure, people now have regular access to clean water without having to take water from improper sources, thereby increasing comfort and safety in meeting basic daily needs. Around 1,200 people from the MBR group receive direct benefits from this water connection, which contributes to improving the quality of life and public health, such as reducing dirty water-based diseases (diarrhea, itching, typhus) (Perumda Tirtanadi, 2023).

The socio-economic impact can also be seen from the savings in household spending on water, which allows for the allocation of funds for other needs such as education and family nutrition. From an environmental perspective, reducing dependence on borewells and uncontrolled surface water helps conserve water resources and reduce environmental pollution. The Village Head and Secretary of Patumbak Kampung Village stated that the community is increasingly concerned about environmental cleanliness and the implementation of healthy living behaviors (Interview, April 22, 2025). Research by Maulida et al. (2022) and Syahrul Ramadhan (2023) also confirms that community-based drinking water supply programs have a positive impact on sanitation and public health behavior. Nevertheless, continuous evaluation and post-installation supervision are essential to sustain this positive impact.

Based on the analysis of the application aspect of the Charles O. Jones implementation model, the Drinking Water Grant Program by Perumda Tirtanadi in Patumbak Kampung Village showed good achievements in the three main dimensions: service providers, outcomes, and impact. Perumda Tirtanadi as the main service provider has carried out technical functions and coordination professionally despite facing limited human resources. The results of the program in the form of the installation of house connections that are in accordance with the target and strictly verified are indicators of the success of the implementation. The impact felt by the community in the form of increasing access to clean water, health, household economic savings, and improving the environment shows that policy goals have been realized. Theoretical reviews and previous research support these findings, while also confirming the importance of strengthening organizational and resource capacity, as well as ongoing monitoring and evaluation. The main recommendations are to increase the number and training of field technical personnel, strengthen coordination between implementing agencies, and post-installation maintenance and monitoring to maintain the sustainability of the positive impact of the program.

Inhibiting Factors

The implementation of public policy is a complex process and is prone to various obstacles that can interfere with the achievement of policy objectives. In the context of the Drinking Water Grant Program by Perumda Tirtanadi

in Patumbak Village Village, these inhibiting factors need to be analyzed in depth to understand the obstacles faced and provide recommendations for improving the implementation of the program. This analysis draws on the theories and concepts of policy implementation from various experts such as Van Meter and Van Horn (1975), Matland (1995), Sabatier and Mazmanian (1980), and Jones (1996), and is supported by previous research studies and interviews with key informants in the field.

1. Ambiguity of Standards and Policy Objectives

One of the main inhibiting factors in policy implementation is the unclear standards and goals to be achieved. Van Meter and Van Horn (1975) emphasized that clarity of policy objectives is very important so that implementing agencies can understand the direction and targets that must be achieved. This ambiguity can lead to different interpretations and inconsistent implementation in the field. In the Perumda Tirtanadi Drinking Water Grant Program, even though SOPs and technical guidelines have been prepared, some residents still do not fully understand the criteria for beneficiaries and program procedures (Perumda Tirtanadi, 2023; Interview with the Head of Patumbak Village Village, April 22, 2025). This condition caused resistance and protests from residents who felt they did not get the opportunity, thus hindering the smooth implementation. Research by Rahmawati et al. (2024) also found that unclear recipient criteria and program mechanisms can reduce the effectiveness of implementation and cause public dissatisfaction. Therefore, intensive socialization and communication as well as more detailed policy elaboration are needed to overcome these barriers.

2. Resource Constraints (Human, Financial, Technological)

The availability of adequate resources is a crucial factor in the success of implementation. Hill and Hupe (2009) stated that adequate allocation of financial, human, and technical resources is the main prerequisite for effective policy implementation. In the case of the Perumda Tirtanadi Drinking Water Grant Program, there are significant obstacles in the form of limited field technical personnel who have to divide their time and capacity to serve seven districts/cities simultaneously, including Patumbak Kampung Village (Perumda Tirtanadi, 2023; Interview with the Head of the Transmission and Distribution Division, April 17, 2025). This causes delays in the installation of the home connection (SR) at several points. In addition, limited companion funds from local governments and slow grant disbursement procedures are also administrative obstacles that interfere with the smooth implementation (Patumbak Sub-district Interview, April 22, 2025; Interview with the Head of the Transmission and Distribution Division, April 17, 2025). Research by Alamsyah (2024) and Yismaya Amazia & Amin (2024) confirms that limited human resources and funds are the main obstacles in drinking water grant programs in various regions. Therefore, increasing the capacity of technical human resources through training and additional personnel as well as improving funding mechanisms is urgently needed.

3. Less Than Optimal Organizational Structure and Inter-Agency Coordination

The organizational structure of the implementing organization and the coordination mechanism between institutions greatly determine the effectiveness of policy implementation (Matland, 1995). Good coordination reduces ambiguity and conflict, thus facilitating implementation. In the Drinking Water Grant Program, although an organizational structure has been formed involving Perumda Tirtanadi, the Ministry of Public Works and Housing, the Ministry of Finance, BPKP, the Inspectorate, Bappeda, the district government, and village officials, coordination between institutions still needs to be strengthened so that there is no overlap of tasks and increases the effectiveness of implementation (Perumda Tirtanadi, 2023; Interview of the Head of Research and Development Division, April 18, 2025). Butar-Butar (2022) research in Pematangsiantar City also found that sectoral egos and a lack of systematic evaluation hinder coordination between implementing drinking water grant programs. These coordination obstacles lead to delays and inefficiencies in program implementation. Therefore, there is a need for a more integrated coordination mechanism and intensive communication between stakeholders.

4. Characteristics of Policy Implementers That Are Not Optimal

The competence, motivation, and commitment of policy implementers greatly influence the results of implementation (Sabatier & Mazmanian, 1980). Implementers who understand the program's objectives and have good technical and interpersonal skills will increase the effectiveness of implementation. In the context of Perumda Tirtanadi, the limited field technical personnel and lack of periodic training are real obstacles (Interview of the Head of Research and Development Division, April 18, 2025). In addition, the suboptimal digital reporting capacity also

hampered the administrative process and disbursement of grant funds (Perumda Tirtanadi, 2023). Research by Eka Gita Duhita (2020) and Reni Handayani (2020) revealed that training and improving the quality of human resources are needed to overcome technical and administrative obstacles in drinking water grant programs. Thus, strengthening the capacity of implementers through training and increasing motivation is an important aspect that must be considered.

5. Communication Barriers and Inter-Organizational Relationships

Effective communication between implementing organizations and stakeholders is essential for coordination and policy adjustment on the ground (Pressman & Wildavsky, 1973). However, in the Drinking Water Grant Program, communication barriers are still found that cause confusion and resistance at the community level as well as coordination that is not optimal between institutions (Interview of the Village Head and the Secretary of Patumbak Village, April 22, 2025). The mismatch of the central-regional schedule and the weak integration of beneficiary data are also problems that slow down the realization of the program (BPKP, 2022). The research of Butar-Butar (2022) and Reni Handayani (2020) also highlights the importance of intensive and transparent communication to reduce conflict and increase community participation. Thus, strengthening communication channels, wider socialization, and accurate data integration are strategic solutions.

6. Social, Cultural, and Economic External Environmental Factors

The social, cultural, and economic conditions of communities at the implementation site can influence the acceptance and support of policies (Hill & Hupe, 2009). In Patumbak Kampung Village, social norms and community customs, such as the tradition of mutual cooperation and patterns of social interaction, play a role in the successful implementation of the program (Interview of the Head of Patumbak Kampung Village, April 22, 2025). However, some people still maintain old habits that sometimes cause resistance to change, for example in terms of paying dues or managing water facilities (Maulida et al., 2022; Syahrul Ramadhan, 2023). The incompleteness of citizens' documents such as KTP and KK is also an administrative obstacle rooted in socioeconomic factors (Perumda Tirtanadi, 2023). Therefore, understanding and adapting to the local socio-cultural context and improving community education are essential to overcome these barriers.

7. Administrative and Financial Barriers

Administrative and financial factors are significant obstacles to the implementation of the drinking water grant program. The strict administrative requirements and reporting formats that must be met on time make it difficult for implementers in the field (Perumda Tirtanadi, 2023). The slow disbursement procedure for grant funds due to waiting for full audit and validation caused delays in implementation (Interview of the Head of the Transmission and Distribution Division, April 17, 2025). In addition, the availability of companion funds from local governments is often constrained by the limitations of the APBD and the lack of budget disbursement, so Perumda Tirtanadi must cover the operational costs of installation first (Patumbak Sub-district Interview, April 22, 2025). Research by Bappenas (2019) and Alamsyah (2024) also emphasized that limited funds and inconsistencies in central-regional budgeting time are the main obstacles in the drinking water grant program. Therefore, there is a need to simplify administrative procedures, accelerate the disbursement of funds, and increase the capacity of digital reporting to overcome these barriers.

8. Ambiguity and Conflict of Interest

The ambiguity-conflict model from Matland (1995) explains that unclear objectives and conflicts of interest can hinder policy implementation. In the Drinking Water Grant Program, ambiguity arises from the ambiguity of recipient criteria, distribution mechanisms, and technical standards that lead to different interpretations among implementers and the public. Conflicts of interest between Perumda Tirtanadi, the village government, and the community regarding fund allocation and development priorities also cause resistance and non-compliance (Perumda Tirtanadi, 2023; Interview of the Head of Research and Development Division, April 18, 2025). Matland (1995) suggests a participatory and adaptive approach to address this, which demands intensive dialogue between stakeholders. Therefore, open communication mechanisms and regular dialogue forums need to be developed to reduce ambiguity and conflict.

Inhibiting factors in the implementation of the Drinking Water Grant Program by Perumda Tirtanadi in Patumbak Kampung Village include unclear standards and policy objectives, limited human and financial resources,

organizational structure and coordination between institutions that are not optimal, characteristics of implementers that have not been maximized, communication barriers, socio-cultural environmental factors, administrative and financial constraints, as well as ambiguity and conflicts of interest. These factors are interrelated and affect the effectiveness of program implementation. Theoretical studies from Van Meter and Van Horn (1975), Matland (1995), Sabatier and Mazmanian (1980), and Jones (1996) reinforce the importance of managing these factors holistically.

The results of interviews with key informants support these findings and emphasize the need to increase the capacity of technical personnel, strengthen cross-agency coordination, intensify socialization, and improve administrative and funding procedures. These improvement efforts are expected to overcome obstacles and increase the success of the implementation of the drinking water grant program for optimal benefits for low-income communities in Patumbak Village.

CONCLUSION

Based on the results of research and discussions that have been carried out regarding the implementation of the 2023 Drinking Water Grant Program by Perumda Tirtanadi in Patumbak Village, Kampung Patumbak District, Deli Serdang Regency, it can be concluded that several things are as follows:

In general, the implementation of the drinking water grant program has gone quite well and in accordance with the targets that have been set. Of the 38 Home Connection (SR) points targeted in Patumbak Village, all have been implemented. This shows the success of the program implementation in the aspect of physical output.

The application aspect, especially the technical implementation, showed positive results in the form of connecting the pipeline network to residents' homes and water distribution that began to run regularly. However, technical obstacles such as rocky ground conditions, weather, and limited number of technical officers.

In terms of outcomes and impact, this program has succeeded in having a significant impact on the beneficiary communities, namely increasing access to proper and safe drinking water, reducing the risk of water-based diseases, saving household costs, and improving the quality of life of the community. This program also supports the achievement of the Sustainable Development Goals (SDGs), especially in the aspects of access to clean water and sanitation.

The main inhibiting factors found include the unclarity of some criteria in society, limited human and financial resources, administrative and procedural obstacles, and coordination constraints between institutions that need to be strengthened. The main success factors are clarity of policy objectives and standards, sufficiency of resources, effective organizational structure, intensive and active communication and socialization.

REFERENCES

- Agustino, L. (2008). *Dasar-dasar kebijakan publik*. Alfabeta.
- Alamsyah, M. S. (2024). *Efektivitas pelaksanaan program hibah air minum bagi masyarakat berpenghasilan rendah di Kabupaten Banyumas* (Tesis). Universitas Soedirman.
- Andriani, dkk. (2012). Implementasi program penyediaan air minum dan sanitasi berbasis masyarakat (PAMSIMAS) tahap II di Kabupaten Lahat: Studi kasus peningkatan perilaku higienis dan pelayanan sanitasi. *Politika: Jurnal Ilmu Politik*, 5(2), 99-113.
- Baidowi, A. (2021). *Implementasi kebijakan pendidikan*. Amerta Media.
- Bappenas. (2019). *Review pelaksanaan program hibah air minum di berbagai kabupaten/kota*. Jakarta: Bappenas.
- Butar-Butar, Y. A. (2022). *Koordinasi pemerintah dalam program hibah air minum untuk masyarakat berpenghasilan rendah di Kota Pematang Siantar* (Tesis). Universitas Sumatera Utara.
- Chaerunnisa, C. (2014). Partisipasi masyarakat dalam penyediaan air minum dan sanitasi berbasis masyarakat (PAMSIMAS) di Kabupaten Brebes. *Politika: Jurnal Ilmu Politik*, 5(2), 99-113.
- Creswell, J. W. (2014). *Research design: Qualitative, quantitative, and mixed methods approaches* (4th ed.). Sage Publications.
- Delvira Permata Sari, & Ananta Prathama. (2023). Implementasi penyaluran hibah air minum perkotaan PDAM Tirta Dharma. *Societas: Jurnal Ilmu Administrasi dan Sosial*, 13(1), 1-11.

- Duhita, E. G. (2016). *Pengelolaan program hibah air minum mengatasi ketersediaan air minum bagi masyarakat berpenghasilan rendah* (Skripsi). Universitas Brawijaya.
- Goggin, M. L., Bowman, A. O., Lester, J. P., & O'Toole, L. J. (1990). *Implementation theory and practice: Toward a third generation*. Scott, Foresman/Little, Brown Higher Education.
- Hanifah, H. (2002). *Implementasi kebijakan dan politik*. Grafindo Jaya.
- Hill, M., & Hupe, P. (2009). *Implementing public policy: An introduction to the study of operational governance* (3rd ed.). Sage Publications.
- Juwiyah, L. (2014). *Implementasi program hibah air minum bantuan luar negeri tahap kedua tahun 2014 di Bandar Lampung: Studi kasus Kelurahan Bakung, Teluk Betung Barat* (Skripsi). Universitas Lampung.
- Jones, C. O. (1996). *Public policy: An introduction to the theory and practice of policy analysis*. Little, Brown.
- Kementerian Kesehatan Republik Indonesia. (2023, 7 Agustus). *Laporan tahunan pengamanan kualitas air minum tahun 2022*. <https://id.scribd.com/document/663428338/FINAL-6072023-Layout-Pengawasan-Air-Minum-1>
- Kementerian Pekerjaan Umum dan Perumahan Rakyat. (2017). *Pedoman pengelolaan program hibah air minum APBN*. Jakarta: Kementerian Pekerjaan Umum dan Perumahan Rakyat.
- Kementerian PPN/Bappenas. (2017). *Metadata SDGs*. Jakarta: Direktorat Perencanaan, Monitoring dan Evaluasi Pembangunan.
- Kementerian PPN/Bappenas. (2022). *Perkuat kolaborasi air minum dan sanitasi*. Jakarta: Direktorat Permukiman Perumahan Bappenas.
- Kementerian PPN/Bappenas. (2019). *Pedoman pengukuran capaian pembangunan perumahan dan permukiman berbasis hasil*. Jakarta: Direktorat Perkotaan, Perumahan dan Permukiman.
- Kodoatie, R. J. (2003). *Pengelolaan sumber daya air dalam otonomi daerah*. Andi Offset.
- Lipsky, M. (1980). *Street-level bureaucracy: Dilemmas of the individual in public services*. Russell Sage Foundation.
- Maulida, A., Rahmawati, F., & Sari, D. P. (2022). Implementasi program penyediaan air minum dan sanitasi berbasis masyarakat (Pamsimas) pada Kecamatan Amuntai Tengah Kabupaten Hulu Sungai Utara: Studi kasus Desa Kembang Kuning dan Pasar Senin. *Jurnal Ilmiah Administrasi Publik*, 11(2), 246–253. <https://doi.org/10.35760/jiap.2021.v11i2.3562>
- Maisyaroh. (2016). Implementasi kebijakan pengelolaan program hibah air minum di Kelurahan Batulayang Kecamatan Pontianak Utara Kota Pontianak (Skripsi). Institut Pemerintahan Dalam Negeri.
- Mazmanian, D., & Sabatier, P. (1983). *Implementation and public policy*. Scott, Foresman.
- Mazy, Y., & Amin, M. D. (2024). Efektivitas program hibah air minum Kementerian Pekerjaan Umum dan Perumahan Rakyat di Kabupaten Kutai Barat. *E-Journal PIN*, 10(4).
- Miles, M. B., Huberman, A. M., & Saldaña, J. (2014). *Qualitative data analysis: A methods sourcebook* (3rd ed.). Sage Publications.
- Moedzakir Djauzzi. (2010). *Studi kasus desain dan metode*. Rajagrafindo.
- Noerbambang, S., & Morimura, T. (2005). *Perencanaan dan pemeliharaan sistem plambing*. Pradnya Paramita.
- Nugroho, R. (2018). *Public policy*. PT. Elex Media Komputindo.
- Peraturan Gubernur Sumatera Utara Nomor 44 Tahun 2023 tentang Rencana Induk Sistem Penyediaan Air Minum Provinsi Sumatera Utara.
- Peraturan Menteri Kesehatan Nomor 492/Menkes/Per/IV/2010 tentang mendefinisikan air minum.
- Peraturan Menteri Pekerjaan Umum Nomor 13/PRT/M/2013 tentang Kebijakan dan Strategi Nasional Pengembangan Sistem Pengembangan Air Minum.
- Peraturan Presiden Nomor 18 Tahun 2020 tentang Rencana Pembangunan Jangka Menengah Nasional (RPJMN) Tahun 2020-2024.
- Pressman, J. L., & Wildavsky, A. (1973). *Implementation: How great expectations in Washington are dashed in Oakland; Or, why it's amazing that federal programs work at all*. University of California Press.
- Rahmawati, F., dkk. (2024). Implementasi program hibah air minum 2024 di Perumda Tugu Tirta Kota Malang. *Jurnal X, Y(Z)*, [halaman].
- Rahman, F. (2024). *Kebutuhan air harian rumah tangga, aksesibilitas dan kesehatan* (Skripsi). Universitas Gadjah Mada.

- Ramadhan, S. (2023). Implementasi program penyediaan air bersih dan sanitasi berbasis masyarakat (PAMSIMAS) di Desa Taraweang Kecamatan Labakkang Kabupaten Pangkajene dan Kepulauan (Tesis). Universitas Hasanuddin.
- Reni Handayani. (2020). Evaluasi program hibah air minum MBR di Provinsi DKI Jakarta.
- Sabatier, P. A., & Mazmanian, D. A. (1980). The implementation of public policy: A framework of analysis. *Policy Studies Journal*, 8(4), 538–560. <https://doi.org/10.1111/j.1541-0072.1980.tb01266.x>
- Sari, D. P., & Prathama, A. (2023). Implementasi penyaluran hibah air minum perkotaan PDAM Tirta Dharma. *Societas: Jurnal Ilmu Administrasi dan Sosial*, 13(1), 1–11.
- Setiawan, G. (2004). *Implementasi dalam birokrasi pembangunan*. Pustaka Pelajar.
- Subarsono. (2005). *Analisis kebijakan publik*. Pustaka Pelajar.
- Syukri, S. H. A. (2019). Analisis kepuasan pelanggan terhadap program hibah air minum bantuan Australian Aid di wilayah Gerung Lombok Barat. *Integrated Lab Journal*, 7(2).
- Tirtanadi. (2023). *Dokumentasi program hibah air minum tahun 2023*.
- Udoji, C. J. O. (1981). *Public administration in Nigeria*. Macmillan.
- Van Meter, D. S., & Van Horn, C. E. (1975). The policy implementation process: A conceptual framework. *Administration & Society*, 6(4), 445–488. <https://doi.org/10.1177/009539977500600404>
- Wahab, A. (2017). *Implementasi kebijakan publik*. PT. Elex Media Komputindo.
- Wawancara Kadiv Transmisi dan Distribusi Perumda Tirtanadi, Dedi Gusman, S. Sos (17 April 2025).
- Wawancara Kepala Divisi Penelitian dan Pengembangan Perumda Tirtanadi, Nurlili, ST, M.Si (18 April 2025).
- Wawancara Kepala Desa Patumbak Kampung, Ahmat Arifin (22 April 2025).
- Wawancara Sekretaris Desa Patumbak Kampung, Siti Rahmadhani (22 April 2025).
- Wawancara Camat Patumbak, Muhammad Kennedy, SIP, M.Si (22 April 2025).
- Wawancara Kepala Dusun IV, Rizal (30 April 2025).
- Wawancara Kepala Dusun III, Wahyu (30 April 2025).
- World Health Organization & UNICEF. (2021). *Progress on household drinking water, sanitation and hygiene 2000-2020: Five years into the SDGs*. <https://washdata.org/publications/progress-on-household-drinking-water-sanitation-and-hygiene-2000-2020>
- Yismaya, A., & Amin, M. D. (2024). Efektivitas program hibah air minum Kementerian Pekerjaan Umum dan Perumahan Rakyat di Kabupaten Kutai Barat. *E-Journal PIN*, 10(4).