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Collaboration on Rural Clean Water Governance: KPSPAM Institutional Capacity Strengthening and Professionalization Program in South Central Timor Regency

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ABSTRACT

Access to clean water is the foundation of sustainable development and human rights, but its sustainability in rural areas such as South Central Timor (TTS) district faces complex multidimensional challenges. The main problem lies not in infrastructure development alone, but in the weakness of sustainable post-construction support systems. An in-depth political economy analysis shows that these challenges are rooted in chronic local government fiscal constraints, ambiguity in the institutional role between agencies, ceremonial cross-sector coordination, and local political dynamics that often sacrifice the stability of the Drinking Water and Sanitation Supply System Management Group (KPSPAM). The Community Service Program (PKM) is designed as a strategic meeting room to address the root of these governance problems through a participatory and collaborative approach. The method of implementing this program includes a series of structured activities: (1) FGD on participatory problem mapping to build mutual understanding; (2) A continuous mentoring survey for KPSPAM with a focus on managerial, financial, technical, and advocacy aspects to formulate institutional solutions. The results achieved from this program are increased stakeholder awareness of the importance of a paradigm shift from a "project" to a "sustainable service" approach, a significant strengthening of KPSPAM's capacity, and the preparation of a draft Joint Action Plan and Standard Operating Procedures (SOPs) for post-construction support. This program recommends that local governments immediately formalize coordination mechanisms, issue regulations that support the allocation of Village Funds for clean water maintenance, and institutionalize KPSPAM's capacity building program on a sustainable basis to ensure the future of clean water services at TTS.

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INTRODUCTION

1.1. Global and National Contexts: The Urgency of Sustainable Water Services

Providing universal access to clean water and adequate sanitation by 2030, as mandated in the sixth Sustainable Development Goals (SDGs), is a fundamental global challenge. Far beyond statistics, access to clean water is a key pillar of public health, food security, gender equality, and economic growth. However, the global narrative is often too focused on "access coverage" or the amount of infrastructure successfully built,

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while crucial issues regarding the long-term sustainability of services are often overlooked. This phenomenon gave birth to what has been referred to as the "infrastructure paradox": millions of dollars were invested to build wells, pumps, and pipelines, yet a third of them were reported to be non-functional within a few years of construction (RWSN, 2010).

This condition is driving a paradigm shift in the global water and sanitation sector, from a project-based approach oriented towards physical development, to a service delivery approach. The service approach emphasizes that the end goal is not an established infrastructure, but rather reliable, safe, and affordable water services that are received by communities on an ongoing basis (Moriarty et al., 2013). Success is measured not by the number of facilities built, but by the functionality, quality, and reliability of services over time. This approach requires balanced attention to the entire system lifecycle, including operations, maintenance, repairs, and life-cycle costs.

In Indonesia, this challenge is becoming more and more real. As an archipelagic country with very diverse geographical and socio-economic conditions, the disparity in access to clean water between urban and rural areas is still significant. The government, through various national programs such as PAMSIMAS (Community-Based Drinking Water and Sanitation Provision), has sought to expand coverage in rural areas with a community-based management model. This model, in theory, is expected to foster a sense of ownership and ensure sustainability. However, practice on the ground shows a more complex picture.

1.2. The Hidden Crisis in South Central Timor (TTS)

South Central Timor Regency (TTS) in East Nusa Tenggara Province (NTT) is a real representation of the challenges of clean water sustainability in Indonesia. As one of the districts with a relatively low Human Development Index (HDI) and water-difficult karst topography conditions, TTS relies heavily on rural water systems built through government and NGO programs. However, data and field reports (USAID, 2024) paint a worrying picture: many of these systems are struggling to survive. The level of unhandled infrastructure damage, frequent service stoppages, and unguaranteed water quality are common complaints.

An in-depth preliminary study, based on document analysis and interviews with stakeholders at TTS, identified that the root of the problem is systemic and rooted in weak governance. The analysis using the Political Economy Analysis (PEA) framework, which examines the interaction between structural factors (policies, regulations, fiscal conditions) and agency factors (interests, incentives, and behaviors of actors) (Avessina, 2024), reveals five main problem knots:

1. Structural Fiscal Constraints: TTS Regional Governments operate with very limited fiscal space. The high dependence on transfer funds from the central government and the minimal Regional Original Revenue (PAD) has led to a very inadequate budget allocation for the clean water sector, especially for post-construction maintenance and support posts.
2. Ambiguity of Institutional Roles: There is a "gray zone" of responsibilities between agencies. The Public Housing and Settlement Areas Office (PRKP) focuses on physical development, but does not have a mandate and sufficient budget for sustainable development. On the other hand, the Community and Village Empowerment Office (DPMD), which ideally fosters institutions at the village level, has not explicitly and proactively taken a role in strengthening KPSPAM.
3. Fragmentation of Cross-Sector Coordination: Existing coordination forums, such as the Working Group on Drinking Water and Environmental Sanitation (Pokja AMPL), tend to be ineffective. Without a strong operational budget and mandate, the forum is more ceremonial and fails to be a platform for integrated planning, monitoring, and problem-solving.
4. Local Political Dynamics: At the village level, KPSPAM is particularly vulnerable to political intervention. The change of village head after the elections is often followed by a complete overhaul of the management of KPSPAM, which leads to a loss of institutional continuity, experience, and knowledge.
5. Uncertainty of the Legal Status of KPSPAM: The majority of KPSPAM operates as an informal institution with no clear legal status. This is a major barrier for them to be able to access formal funding sources, especially the Village Fund, whose regulations require that the recipients of assistance be officially recognized village institutions.

The failure of clean water services at TTS, therefore, is not just a technical problem or a community failure. This is a reflection of the failure of the broader governance system. Therefore, any intervention aimed at creating sustainable change must go beyond pump repairs or technical training alone. An intervention that touches the heart of the problem is needed: that is, by improving the way actors (government, KPSPAM, society) interact within a clearer, fairer, and more supportive framework of the rules of the game. This Community Service Program (PKM) is specifically designed to bridge these governance gaps through a collaborative and participatory approach, with the ultimate goal of building a solid foundation for sustainable clean water services for the TTS community.

PARTNER PROBLEMS

The main partners in this service program are multi-stakeholders, including the clean water management community at the grassroots level and local government apparatus as policy makers and support providers. The problems faced are interrelated and form a cycle of problems that are difficult to decide. The in-depth analysis identifies specific problems at two main levels:

2.1. Problems at the Community Level (KPSPAM)

KPSPAM, as the frontline of water service management at the village level, faces a series of internal and external challenges that hinder their performance.

- Limited Managerial and Financial Capacity: Most KPSPAM is born from projects and is managed on a voluntary basis. As a result, their managerial capacity is often very limited. They have difficulty in doing accountable bookkeeping, which leads to unclear cash flows. More crucially, they lack the ability to set fair and sustainable rates. Rates are often only sufficient to cover minor operating costs (e.g., electricity or fuel), but do not take into account the cost of preventive maintenance, unexpected repairs, let alone asset depreciation for future replacement (capital maintenance expenditure). The concept of life-cycle costing (Fonseca et al., 2011) is almost never applied, making the system highly susceptible to damage.
- Acute Dependence on External Support: Due to weak financial capacity, KPSPAM has become highly dependent on external assistance when dealing with medium- to large-scale damage. A broken main pipe or a completely damaged pump can cripple service for months. They had to go through a long and uncertain bureaucratic flow to ask for help from the PRKP Office, which also had limited resources. This dependency creates a passive mentality and reduces local initiatives to seek independent solutions.
- Weak Bargaining Position in the Village Political Arena: KPSPAM is often seen as a technical entity separate from the village government structure. As a result, they are rarely invited or actively involved in crucial forums such as the Village Development Planning Conference (Musrenbangdes). The need for the maintenance, rehabilitation, or expansion of clean water networks is less competitive with other programs that are considered more populist or physically visible, such as the construction of roads or multipurpose buildings. Without strong representation, the aspirations of clean water sustainability fail to translate into priorities in the Village Government Work Plan (RKPDes) and the allocation of Village Funds.
- Vulnerability to Village Political Dynamics: The stability of KPSPAM management is very fragile and easily influenced by local political constellations. In many documented cases (USAID, 2024), the change of village head after the Pilkades is often a "tsunami" for KPSPAM. The elected village head, especially if the previous KPSPAM management did not support him, tends to carry out a complete overhaul. This process ignores competence and experience, leading to the loss of institutional memory and knowledge that has been built up over years. As a result, KPSPAM has to start over from scratch with new administrators who do not necessarily have the same understanding and commitment.

2.2. Problems at the Local Government Level (Related Agencies)

Local governments, which are supposed to act as facilitators and safety net providers, are instead facing internal constraints that hinder their ability to provide effective support.

- Budget Constraints and Reactive Allocations: As has been identified, fiscal constraints are a fundamental problem. The budget allocated by the PRKP Office for maintenance is very minimal, reportedly only around 200-300 million rupiah per year (USAID, 2024). This figure is not proportional to the number of systems that must be monitored and the potential damage that can occur. As a result, the allocation of funds is reactive (ad-hoc), only responding to reports of severe damage, not for systematic preventive maintenance.
- Institutional Ambiguity: This is at the heart of governance issues. There is a lack of clarity on the post-construction mandate. The PRKP Office feels that its main task is to build physical infrastructure. The DPMD Office, which has a mandate for community empowerment and village institutional development (including BUMDes and LKDs), has not proactively and structured to take a role in fostering KPSPAM. This role vacancy caused KPSPAM to be institutionally "abandoned" after the project was completed.
- Unsystematic and Integrated Monitoring: There is no unified monitoring system for hundreds of clean water systems scattered throughout TTS. Monitoring is often sporadic and opportunistic, for example, when service staff happen to visit a village for other business. Reporting from the village to district level is also not running. As a result, local governments lack accurate and real-time data regarding the condition of system functionality, so small problems accumulate into major breakdowns that are more expensive to repair.
- Weak and Ceremonial Cross-Sector Coordination: The AMPL Working Group, which is supposed to be the "kitchen" for the coordination of clean water policies and programs, is not functioning optimally.

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This forum is not supported by an adequate operational budget and a strong mandate from regional leaders. The meetings held tend to be a place for information sharing without producing strategic decisions or joint action plans that can be executed. The "sectoral ego" mentality, in which each service focuses only on its main tasks and functions, further exacerbates this fragmentation.

Overall, the problems at these two levels create a vicious cycle: weak KPSPAM is unable to manage services independently, while local governments hampered by internal problems are unable to provide the support they need. Breaking this loop requires comprehensive intervention and targeting both levels simultaneously.

IMPLEMENTATION METHOD

To answer the complexity of the problems that have been identified, this service program adopts a Participatory Capacity Development (PCD) approach. This approach was chosen because of its basic philosophy that places partners (KPSPAM and local governments) as active subjects in the process of change, rather than as passive objects of aid recipients. PCD emphasizes the process of joint learning, dialogue, and collaboration to formulate solutions that are contextually relevant and locally owned. The program is designed in four main stages that are mutually sustainable:

Phase 1: Focus Group Discussion and Participatory Problem Mapping Workshop This stage is the foundation of the overall program, aiming to build a common foundation of understanding and commitment among all stakeholders.

- Participants: Key representatives from Bappeda (as planning coordinator), PRKP Office, DPMD Office, Health Office, several KPSPAM representatives from various sub-districts, as well as several village heads and community leaders.
- Purpose:
  - Validation of Findings: Present the results of preliminary studies to be validated and enriched by the participants' hands-on experiences.
  - Problem Mapping: Using facilitation tools such as Problem Tree Analysis to visually map the root causes, core problems, and impacts of clean water service failures. This process helps participants see how the problems they are facing (e.g., low rates at the KPSPAM level) are connected to problems at other levels (e.g., the absence of regulation at the district level).
  - Stakeholder Mapping: Identify all actors involved, analyze their roles, interests, and levels of influence in clean water issues.
  - Build Initial Commitments: Produce an initial written agreement or commitment from all participants to actively participate in the next stages of the program.

Phase 2: Mapping survey Mentoring for stakeholders This stage is a direct intervention at the grassroots level that aims to transform KPSPAM from a voluntary organization into a semi-professional service provider.

- Survey Focus: Training is designed in the form of comprehensive modules:
  - Aspect 1: Organizational & Institutional Management: the survey includes the preparation of the Articles of Association/Bylaws (AD/ART), formulation of the vision and mission, clear division of labor, and the preparation of management succession plans to address the problem of village political intervention.
  - Aspect 2: Sustainable Financial Management: the survey delves into the concept of life-cycle cost. Participants were taught how to calculate operational and maintenance (O&M) costs, set aside funds for capital maintenance, and based on these calculations, simulate the determination of a fair and adequate tariff structure. Participants were also trained to make simple bookkeeping (cash book, monthly financial statements) to increase transparency.
  - Aspect 3: Basic Technical Management: the survey delves into perceptions of the identification of common types of damage to piping and pump systems, preventive maintenance techniques (e.g., reservoir cleaning), and how to make minor repairs. The goal is to reduce reliance on outside technicians for minor issues.
  - Module 4: Advocacy and Public Communication: a survey on how to prepare effective proposals to be submitted in the Musrenbangdes. This includes how to collect supporting data (number of households served, damage rate), formulate arguments, and present them before village governments and communities.

Phase 3: Reflection of the FGD and the Importance Mapping Survey and the Sustainability Plan This final stage aims to test the effectiveness of the solutions that have been formulated and ensure the existence of a plan for the sustainability of the program.

- Preparation of Sustainability Plan: Based on the results of the evaluation, the PKM team and partners formulate concrete policy recommendations and follow-up plans so that the initiatives that have been started can be replicated and institutionalized by the local government after the PKM team's presence is completed.

RESULTS AND DISCUSSION

The Community Service Program implemented during the 2024 period has succeeded in achieving a series of significant results that have an impact not only on the technical level, but also on the governance and paradigm level of stakeholders. The following discussion will outline these results and analyze them within the framework of the theories and problems that have been identified.

4.1. Outcome 1: Paradigm Shift from "Project" to "Service"

One of the most fundamental and qualitative outcomes of this FGD and survey is the birth of mutual understanding and commitment among stakeholders. Through participatory initial workshops, the walls of the "sectoral ego" began to erode. When representatives from the PRKP, DPMD, Bappeda, and KPSPAM sat together and mapped the problem tree, they began to realize that the problem of "broken pumps" in a village is not just a problem of KPSPAM. They see the relationship with the absence of a maintenance budget at the PRKP Office, the unclear role of coaching by the DPMD, and the weak planning at Bappeda.

This discussion triggered a crucial paradigm shift: from a "project" approach that sees success as limited to the completion of construction, to a "service" approach that defines success as the availability of reliable, safe, and sustainable water services for communities (Moriarty et al., 2013). Participants from local governments began to realize that their responsibilities did not stop when the project was handed over. On the contrary, KPSPAM is also beginning to understand that they are not just "asset keepers," but "service providers" who must be professional. The joint commitment contained at the end of the workshop became a very valuable social capital for the success of the next stage of the program.

Discussion: The Interaction between Structural Change and Agency

The success of this program lies in its ability to intervene at the structural and agency levels simultaneously. Interviews involving KPSPAM are interventions at the agency level, which increase the capacity, knowledge, and motivation of actors at the grassroots. However, without improvements at the structural level, this increase in capacity will be in vain. KPSPAM is smart in making proposals that will be useless if there is no clear mechanism to submit them (Musrenbangdes) or if its legal status does not allow it to receive funds.

Instead, the formulation of SOPs and Action Plans is an intervention at the structural level, which creates a new, clearer "rules of the game". However, this rule will only become a paper tiger if the agencies (official staff and KPSPAM administrators) do not have the capacity or incentives to implement it.

The program shows a positive interaction: KPSPAM that has more capacity (agencies) becomes more confident to claim its rights and participate in the new framework provided (structure). On the other hand, the existence of a clear SOP (structure) provides a foundation for regional leaders to demand better performance from their official staff (agencies). Thus, the program has started a positive cycle where improvements at the agency level drive structural effectiveness, and improvements at the structural level provide room for agencies to perform better. This is the essence of the application of political economy analysis in a service program: not only identifying problems, but also designing interventions capable of transforming the interaction between structures and agencies towards better outcomes.

CONCLUSION

This Community Service Program has successfully initiated a transformative process in rural clean water governance in South Central Timor Regency. By applying a participatory capacity-building approach based on political economy analysis, the program has gone beyond conventional technical interventions and touched on the root of systemic problems.

The main conclusions of the program are:

1. Collaborative Initiation Success: This program proves that complex governance issues involving multiple sectoral egos can be addressed through the facilitation of structured dialogue. This process succeeded in building a crucial foundation in the form of mutual understanding and collective commitment among local governments, village governments, and KPSPAM.
2. Paradigm Shift as Key: There has been a significant paradigm shift from a "project" approach to a "sustainable service." This change in perspective is a fundamental prerequisite for ensuring that future policy focus and resource allocation will be more oriented towards long-term sustainability.

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3. The Importance of Two-Way Interventions: The sustainability of clean water services can only be achieved through simultaneous interventions at two levels. Strengthening agency capacity (professionalization of KPSPAM) must be balanced with structural improvements (creation of regulations, SOPs, and clear funding mechanisms). One will not be effective without the other.
4. Real Achievements as Capital for Change: This program has produced concrete achievements in the form of increasing the managerial and financial capacity of KPSPAM in pilot villages as well as the birth of draft Action Plans and SOPs for post-construction support. This is not only a program output, but also a strong initial capital for local governments to continue and expand the clean water governance reform process.

Overall, this service program has planted the seeds of change by building the foundation for a more structured, participatory, and accountable post-construction support system, which ultimately has the potential to significantly improve the sustainability of clean water services in the future.

Suggestions

Based on the above conclusions and learnings during the program implementation process, a series of strategic and operational suggestions were formulated to ensure the sustainability of the initiatives that have been initiated:

1. For the South Central Timor Regency Government:
   - Formalization of Regulations (Priority Suggestions): Immediately formalize the draft of the Action Plan and SOPs that have been jointly prepared into a Regent Regulation (Perbup) on the Governance of Rural Drinking Water Services. The status of the Perbup will provide binding legal force for all related agencies, village governments, and KPSPAM, as well as be the basis for budget allocation.
   - Institutionalization of Coordination: Allocating a routine and adequate operational budget in the APBD for the coordination forum of the AMPL Working Group. This budget will allow the Working Group to hold regular meetings, conduct joint field visits, and function effectively as a cross-sectoral monitoring and evaluation platform, rather than just a ceremonial forum.
   - Issuance of Village Fund Technical Guidelines: The DPMD Office, in collaboration with Bappeda and the PRKP Office, needs to immediately issue technical guidelines or circulars for village governments. This guide should explicitly explain the mechanism for using Village Funds for maintenance, rehabilitation, and even subsidy for the poor, as well as provide a detailed explanation of the options, procedures, and implications of each legal form for KPSPAM (BUMDes vs. LKD).
2. For KPSPAM and the Community:
   - Proactive in Village Planning: KPSPAM must be consistently and proactively involved in the village planning cycle, especially Musrenbangdes. Don't wait to be invited, but actively communicate with the village government and BPD to fight for budget allocation for the clean water sector.
   - Increase Accountability to Build Trust: Continue to increase transparency and accountability in the management of contributions from the community. Financial reports that are simple but regular and accessible to the public will build trust, which is the key to increasing citizens' willingness to pay contributions in a sustainable manner.
   - Form of Inter-KPSPAM Communication Forum: Initiating the formation of a forum or association of KPSPAM at the sub-district or district level. This forum can be a forum for mutual learning, sharing experiences, and most importantly, improving the collective bargaining position before local governments.
3. For Further Service and Research Programs:
   - Focus on Implementation Assistance: The next service program must focus on assisting the implementation of Perbup and SOPs that have been passed in all district areas, ensuring that the new regulations are actually implemented in the field.
   - Development of Digital Monitoring Systems: Supporting Bappeda to realize and improve integrated digital monitoring systems (such as the SIAIRMAS application). This system must be designed to be easy to use by village officials or KPSPAM administrators to report the condition of the system in real-time, thus allowing for a faster response from the relevant agencies.
   - Issue Expansion: Future research and service can expand the scope of the issue to aspects of water quality and the protection of raw water sources. Given the challenges of climate change, programs that integrate technical management with environmental conservation will become increasingly relevant.

REFERENCES

[1] Fonseca, C., Franceys, R., Batchelor, C., McIntyre, P., Klutse, A., Komives, K., Moriarty, P., Naafs, A., Nyarko, K., Pezon, C., Potter, A., Reddy, R. & Snehalatha, M. (2011). Life-cycle costs approach: Costing sustainable services. WASHCost Briefing Note 1a. IRC International Water and Sanitation Centre.

[2] Harris, D. (2013). Applied Political Economy Analysis: A Problem-Driven Framework. Overseas Development Institute (ODI).

[3] Lockwood, H., & Le Gouais, A. (2015). Professionalising community-based management for rural water services. IRC International Water and Sanitation Centre.

[4] Moriarty, P., Smits, S., Butterworth, J., & Franceys, R. (2013). Trends in rural water supply: Towards a service delivery approach. Water Alternatives, 6(3), 329-349.

[5] RWSN (Rural Water Supply Network). (2010). Myths of the rural water supply sector. Perspectives Paper No. 4. RWSN Executive Steering Committee.

[6] USAID. (2024). Draft Brief: Timor Tengah Selatan Regency. [Dokumen Internal].

[7] USAID. (2024). Discussion: A Political Economy Perspective on Sustainable Rural Water Supply. [Dokumen Internal].