

International Journal Research Publication Analysis

Page: 01-10

FINANCIAL CONTRIBUTION OF COMMUNITIES TO THE MANAGEMENT OF RURAL WATER SUPPLY AND SANITATION AGENCY WATER PROJECTS IN MBARALI DISTRICT COUNCIL, MBEYA REGION, TANZANIA

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Article Received: 07 September 2026

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Article Revised: 27 September 2026

Department of Community Development, Mbarali District Council

Published on: 17 October 2026

DOI: <https://doi-doi.org/101555/ijrpa.3283>

ABSTRACT

Sustainable rural water services depend on whether households are willing and able to meet recurrent operation and maintenance costs, yet the dynamics of financial contribution under Tanzania's agency-led, community-managed water model remain thinly documented. This study examined the financial contribution of communities to the management of Rural Water Supply and Sanitation Agency (RUWASA) water projects in Mbarali District Council, Mbeya Region. A mixed-methods, cross-sectional design combined a survey of 60 households with key informant interviews and six focus group discussions across six villages. Results show that 91.7% of households contribute and 96.7% are willing to pay, with 75% paying Tsh. 5,000-10,000 per contribution. However, 81.7% had defaulted at least once, mainly because of lack of money (66.7%) rather than unwillingness. Generally, low income (46.7%), lack of trust in fund management (30%), and dissatisfaction with services (21.7%) were the leading challenges. Although 86.7% knew how funds are used, disclosure relied on public meetings (70%) and verbal announcements (25%), with notice boards used by only 5%. The study concludes that financial contribution is constrained less by unwillingness than by seasonal household poverty, limited written transparency, and service reliability, and recommends written financial reporting, seasonally flexible payment arrangements, and more reliable service delivery.

KEYWORDS: Financial contribution, cost recovery, community-managed water supply, RUWASA

1. INTRODUCTION

Reliable rural water services depend not only on infrastructure but on money to operate, maintain, and repair it. Access to safe water is central to Sustainable Development Goal 6 (United Nations, 2023), yet about 2.2 billion people still lack safely managed drinking water, mostly in rural areas of developing countries. Community-based management has become the dominant response, on the premise that beneficiary involvement strengthens accountability, transparency, and ownership (Adams, Zulu, & Ouellette-Kray, 2020; Herrfahrtdt-Pähle et al., 2025). In sub-Saharan Africa, however, many schemes fail because of weak local institutions, insufficient financing, and limited ownership (Lema, 2025). External funding alone cannot meet operating costs, which makes user contributions a central pillar of sustainability (Joseph, Hoo, Wang, Bahuguna, & Andres, 2024).

Tanzania has embedded community participation and cost-sharing in rural water delivery through the National Water Policy of 2002, the Water Resources Management Act No. 11 of 2009, and the Water Supply and Sanitation Act No. 5 of 2019, implemented through the Rural Water Supply and Sanitation Agency (RUWASA) and Community-Based Water Supply Organizations (CBWSOs). Yet many rural water points remain non-functional because of inadequate maintenance and limited beneficiary participation (Mwakalila & Muneeni, 2025; Kiula, de Vries, & Kalori, 2026), and weak financial capacity and low transparency continue to constrain community-based management (Lima et al., 2025; Joseph et al., 2024). In Mbarali District Council, how much households contribute, how regularly, why some fail to pay, and whether they know and trust how funds are used remain insufficiently documented.

This paper reports one component of a wider study of community participation in RUWASA water projects. Its single objective is to examine the financial contribution of the community to RUWASA water projects in Mbarali District Council, covering contribution levels and frequency, non-payment, fund transparency, and willingness to pay. The findings are intended to inform RUWASA, local authorities, water committees, and policymakers on sustaining community cost recovery.

2. Literature Review

2.1 Theoretical Framework

The study is anchored on Participatory Development Theory, developed by Paulo Freire and expanded by Robert Chambers (Mgulo & Kazer, 2022), which holds that sustainable development requires beneficiaries to take part in decisions, contribute resources, and

monitor progress rather than remain passive recipients. Financial contribution is a clear expression of such ownership. The theory is, however, criticised for overestimating community capacity and underestimating structural constraints. For financial contribution that constraint is poverty, since willingness does not guarantee ability to pay. The study therefore asks whether the conditions that turn willingness into reliable payment are in place.

2.2 Empirical Review

Community-managed systems need continuous funds for operation, maintenance, and emergency repair, and community contributions are among the most reliable revenue sources in low-income settings; schemes with adequate contributions undertake preventive maintenance and keep service running (Joseph et al., 2024; Chimphero, Tembo, & Gadama, 2026). Regular, timely payment gives committees predictable revenue and resilience (Hukka & Katko, 2021), whereas irregular payment delays repairs and lets minor faults escalate (Joseph et al., 2024). Late payment in East Africa is linked to seasonal income, poor service quality, and weak enforcement (Kuleana & Ngalapi, 2023), and contribution requirements should reflect household affordability to avoid excluding poorer users (Chimphero et al., 2026).

Transparent management, meaning open sharing of information on revenue, expenditure, and procurement, strengthens confidence and continued participation (Ribeiro & Fontenele, 2026; Moreira et al., 2024), while weak transparency leaves people reluctant to pay when they do not know how funds are used (Mwakalila & Muneeni, 2025). Willingness to pay rises with trust in leadership, satisfaction with service quality, and confidence that funds are used appropriately (Chimphero et al., 2026; Beshir, Reddythota, & Alemayehu, 2024), and falls where users suspect mismanagement (Ng'wigulu, 2025). These indicators have mostly been studied separately and in other settings; little localised evidence exists on how they operate together in RUWASA-managed schemes in Mbeya Region. This study addresses that gap.

3. STUDY METHODOLOGY

The study was conducted in Mbarali District Council, Mbeya Region, covering three wards (Ubaruku, Mapogoro, and Mawindi) and six villages, two per ward. The district is predominantly rural and agricultural, and water services are delivered mainly through community-managed schemes overseen by village governments and water committees. A mixed-methods, cross-sectional design was used. Applying Yamane's (1967) formula to about 16,949 beneficiary households with a 10% margin of error gave a sample size of 99. The sample size of 60 household water users was selected by using simple random sampling

from village registers and water user records, and 39 key informants (16 water committee members, 8 village leaders, 7 ward leaders, and 8 district water officers), selected purposively. Six focus group discussions (FGDs), one per village, were held with eight ordinary water users each (48 discussants). All quantitative results reported here come from the 60 household respondents.

Data were collected using a structured questionnaire, semi-structured interview and FGD guides, and a review of district water office records. Quantitative data were analysed descriptively (frequencies and percentages) in SPSS version 20.0, and qualitative data thematically to explain the quantitative results. Instruments were reviewed for content and face validity by supervisors and district water experts, and reliability was assessed using Cronbach's alpha (acceptable at 0.70 or above; Taber, 2018). Ethical clearance was obtained from the University of Iringa, permission from Mbarali District Council and RUWASA, and informed consent from all participants. Limitations include the small household sample, which restricts generalisation; the cross-sectional design, which cannot show causality or seasonal variation in payment; and reliance on self-reported data, which may reflect recall and social desirability bias, mitigated through triangulation with qualitative accounts.

4. RESULTS AND DISCUSSION

4.1 RESPONDENT PROFILE

Most respondents were aged 30-44 years (60%), married (81.7%), and engaged in smallholder farming (55%); 35% had primary and 31.7% secondary education, and 20% had no formal education. Nearly half (46.7%) had lived in their villages for ten years or more, and half had used the local water project for over six years. Household income is therefore closely tied to the rain-fed agricultural calendar.

4.2 Household Contribution, Frequency, and Amount

As Table 1 shows, 91.7% of households contribute financially. Frequency varied: 48.3% paid monthly, 30% annually, and 21.7% only when requested. Three-quarters (75%) paid Tsh. 5,000-10,000 per contribution.

Table 1: Household financial contributions, frequency, and amount. (n = 60)

Indicator	Frequency	Percent
<i>Household contributes financially</i>		
Yes	55	91.7
No	5	8.3
<i>Frequency of contribution</i>		
Monthly	29	48.3
Annually	18	30.0
Only when requested	13	21.7
<i>Amount contributed</i>		
Less than Tsh. 5,000	13	21.7
Tsh. 5,000–10,000	45	75.0
Tsh. 10,001–20,000	2	3.3

Source: Field data, 2026. Percentages are of all 60 respondents.

A Village Executive Officer described how rates are set:

“... we convene a general village meeting where the water committee and RUWASA experts present a breakdown of operational costs. Community members then deliberate and agree on a fair price rate that an average citizen can afford without hardship.” (Interview with VEO, 22 June 2026)

These results show strong buy-in for cost recovery, consistent with evidence that rural households in southern Tanzania pay when water points are reliable (Bakari & Lema, 2024; Saria & Joseph, 2023). The dominant Tsh. 5,000–10,000 band matches what RUWASA (2023) regards as a realistic threshold for smallholder communities and reflects the deliberative rate-setting described above. Frequency is less reassuring: 51.7% of households pay annually or only on request, so revenue arrives in lumps rather than as the predictable stream that supports preventive maintenance (Hukka & Katko, 2021).

4.3 Non-Payment and Challenges Affecting Contribution

Despite this willingness, 81.7% of respondents had failed to pay at least once (Table 2). Individually, 66.7% cited lack of money and 20% competing household priorities, while dissatisfaction with services (6.7%), lack of trust (3.3%), and forgetting (3.3%) were minor. Asked about challenges in general, however, respondents named low household income (46.7%), lack of trust in fund management (30%), and dissatisfaction with services (21.7%).

Table 2: Non-payment, reasons, and leading challenges. (n = 60)

Indicator	Frequency	Percent
<i>Failed to make a required contribution at least once</i>		
Yes	49	81.7
No	11	18.3
<i>Primary individual reason for non-payment</i>		
Lack of money	40	66.7
Competing household priorities	12	20.0
Dissatisfaction with services	4	6.7
Lack of trust in management	2	3.3
Forgot to pay	2	3.3
<i>Leading challenge affecting contributions (general)</i>		
Low household income	28	46.7
Lack of trust in fund management	18	30.0
Dissatisfaction with water project services	13	21.7
Other household demands	1	1.7

Source: Field data, 2026

An FGD discussant confirmed the income explanation:

“The main challenge is household income poverty among certain families (especially widows, persons with disabilities, and elders without caregivers).” (FGD with community water users, 6 July 2026)

Near-universal willingness alongside frequent lapses shows that non-payment is driven mainly by capacity-to-pay constraints rather than unwillingness (Chimphero et al., 2026). Reliance on rain-fed agriculture makes monthly cash payments difficult in non-harvest months, consistent with evidence of seasonal default spikes (Kuleana & Ngalapi, 2023). Yet trust and service dissatisfaction together account for 51.7% of the general challenges but only 10% of individual reasons. This may reflect a readiness to see governance failure as a community problem rather than a personal reason for withholding payment, or social desirability bias; cross-sectional data cannot separate the two. Either way, it fits evidence that households sometimes withhold payment as a silent protest against weak transparency or unreliable supply (Kamwela & Kibona, 2023; Saria & Joseph, 2023). Easing seasonal burdens must therefore go together with better transparency and service reliability.

4.4 Fund Transparency and Perceived Financial Management

Awareness of how funds are used was high (86.7%), but disclosure relied mainly on public meetings (70%) and verbal announcements (25%), with notice boards least used (5%) (Table 3). Most respondents (76.7%) rated the committee’s financial management as effective, while 23.3% did not.

Table 3: Awareness of fund use, information channels, and rating of financial management. (n = 60)

Indicator	Frequency	Percent
<i>Aware of how collected funds are used</i>		
Yes	52	86.7
No	4	6.7
Not sure	4	6.7
<i>Main channel for communicating fund use</i>		
Public community meetings	42	70.0
Verbal announcements	15	25.0
Notice boards	3	5.0
<i>Committee financial management rated as</i>		
Effective	46	76.7
Ineffective	14	23.3

Source: Field data, 2026

High awareness suggests a measure of openness and confirms the central role of village assemblies, which build trust and willingness to pay (Mtani & Lyimo, 2023; Whaley, MacAllister, Macdonald, & Kebede, 2021). Two cautions apply. First, verbal disclosure leaves no verifiable record and excludes members who cannot attend; written postings would extend access and create an audit trail (Bakari & Lema, 2024; Ribeiro & Fontenele, 2026). One FGD reported that written reports are posted at village and ward offices, yet only 5% of respondents named notice boards as their source, suggesting uneven practice. Second, the 23.3% who rated management as ineffective, and the 30% who named lack of trust as a challenge, signal a minority whose grievances could weaken future collection if left unaddressed (Mtani & Lyimo, 2023).

4.5 Willingness to Contribute and Community Suggestions

Willingness to contribute was near-universal (96.7%; Table 4). To improve contributions, respondents called for greater transparency and accountability (46.7%), better water services (36.7%), and stronger monitoring of funds collected (16.7%).

Table 4: Willingness to contribute and suggestions for improvement. (n = 60)

Indicator	Frequency	Percent
<i>Willing to contribute financially</i>		
Yes	58	96.7
No	2	3.3
<i>Suggestions for improving contributions</i>		
Improve transparency and accountability in fund management	28	46.7
Improve water project services	22	36.7
Improve monitoring and evaluation of funds collected	10	16.7

Source: Field data, 2026

This willingness reflects the ownership that Participatory Development Theory predicts, but the suggestions show that it is conditional: users see payment as a value-for-service exchange and expect transparent management and dependable supply (Chowns, 2021; RUWASA, 2023; Beshir et al., 2024). Willingness converts into dependable revenue only where affordability, transparency, and service reliability are secured.

5. CONCLUSION AND RECOMMENDATIONS

This study examined the financial contribution of the community to RUWASA water projects in Mbarali District Council. Households contribute widely (91.7%) and are almost universally willing to pay (96.7%), mostly within an affordable, deliberated band of Tsh. 5,000-10,000. Contribution is nevertheless unstable: 81.7% had lapsed at least once, mainly through lack of money (66.7%) rather than unwillingness, and about half pay only annually or on request. Financial contribution is therefore constrained less by unwillingness than by seasonal household poverty, limited written financial transparency, and service reliability that shapes trust. The near-universal willingness and the generally positive rating of committee financial management (76.7%) provide a base for locally financed operation and maintenance. First, RUWASA and water committees should adopt standardised written financial reporting, such as quarterly statements posted at village and ward offices and read out at assemblies. Second, government, RUWASA, and development partners should support seasonally flexible payment schedules and revolving maintenance funds, with arrangements for vulnerable households. Third, RUWASA and water committees should shorten repair times and pre-position spare parts to protect the value-for-service perception on which payment depends. Fourth, committees and village governments should introduce routine community-led monitoring of collected funds. Further research should use larger samples across Mbeya Region and longitudinal designs that track payment across agricultural seasons, and should examine mechanisms such as village savings and loan-linked water funds.

REFERENCES

1. Adams, E. A., Zulu, L., & Ouellette-Kray, Q. (2020). Community water governance for urban water security in the Global South: Status, lessons, and prospects. *Wiley Interdisciplinary Reviews: Water*, 7(5), e1466.
2. Bakari, K., & Lema, A. M. (2024). Determinants of community participation and institutional effectiveness in rural water projects in Tanzania. *Tanzanian Journal of Development Studies*, 22(1), 45–63.
3. Beshir, M., Reddythota, D., & Alemayehu, E. (2024). Household willingness to pay for

- improved water supply services: Contingent valuation evidence from Ethiopia. *Applied Water Science*, 14(3), 45–58.
4. Chimphero, L. M., Tembo, M., & Gadama, R. (2026). Community engagement and capacity building as determinants of rural water supply functionality: A case of Traditional Authority Mankhambira in Nkhata Bay District, Malawi. *Journal of Water, Sanitation and Hygiene for Development*, 16(1), 22–35.
 5. Chowns, E. (2021). The political economy of community management: Rethinking rural water governance in East Africa. *Development Policy Review*, 39(1), 118–135.
 6. Herrfahrtd-Pähle, E., Houdret, A., Dombrowsky, I., Cullmann, J., Mukherji, A., Unver, O., & Varady, R. (2025). Empowering global water governance: Taking the 2023 UN Water Conference outcomes forward to address the current water crises. *Water International*, 50(1), 4–10.
 8. Hukka, J. J., & Katko, T. S. (2021). Towards sustainable water services: Subsidiarity, multi-level governance and resilience for building viable water utilities. OECD.
 9. Joseph, G., Hoo, Y. R., Wang, Q., Bahuguna, A., & Andres, L. (2024). Funding a water-secure future.
 10. World Bank Group.
 11. Kamwela, A., & Kibona, D. (2023). Dynamics of social inclusion and public compliance in community-based water schemes in Tanzania. *Tanzanian Journal of Development Studies*, 21(2), 88–104.
 12. Kiula, K. P., de Vries, W. T., & Kalori, J. (2026). A theoretical evaluation of community participation in Nyanguku Ward dam construction project in Geita, Tanzania. *Marcapada: Jurnal Kebijakan Pertanahan*, 5(2), 179–194.
 13. Kuleana, M., & Ngalapi, J. (2023). Time poverty, seasonality, and civic participation in rural utility management in East Africa. *East African Journal of Social Sciences*, 5(1), 34–49.
 14. Lema, M. W. (2025). Sustaining rural livelihoods through participatory water governance: A review of community-driven water resource management models in East and Central Africa. *Frontiers in Water*, 7, 1704600.
 15. Lima, M. H., Salehin, M., Chowdhury, M. A., Hasan, M. H., Hossain, M. J., & Bala, S. K. (2025). From participation to empowerment: The case of women in community-based water management in hydrologically diverse southwest coastal Bangladesh. *Environment, Development and Sustainability*, 1–28.
 16. Mgulo, P., & Kazer, R. (2022). Paulo Freire and Robert Chambers: Theoretical foundations of participatory development in modern Africa. *Journal of Development Theory and Practice*, 14(2), 101–118.

17. Moreira, F. D., Fonseca, P. R. S., Miranda, R. M., Oliveira da Costa, L., & Mejias Carpio, I. E. (2024). Stakeholder engagement for inclusive water governance in a rural community in Brazil. *Frontiers in Water*, 6, 1378514.
18. Mtani, A., & Lyimo, C. (2023). Administrative communication, transparency, and trust in rural water supply management in Tanzania. *African Journal of Public Administration*, 29(3), 145–161.
19. Mwakalila, E. S., & Muneeni, J. M. (2025). Role of local water institutions in water resources management in Sanya-Kware sub-catchment of the Pangani Basin, Tanzania. *Journal of Basic and Applied Research International*, 31(1), 1–18.
20. Ng'wigulu, K. L. (2025). The effect of non-revenue water on the efficiency of water projects in Tanzania: A case of Moshi Urban Water Supply and Sanitation Authority (Doctoral dissertation). The Open University of Tanzania.
21. Ribeiro, F. W., & Fontenele, R. E. S. (2026). Financing water resources management through multistakeholder governance: The potential of payments for ecosystem services and donations. Accessed at <https://doi.org/10.21203/rs.3.rs-8542176/v1>
22. Rural Water Supply and Sanitation Agency [RUWASA]. (2023). National operational report and strategic directives for community-owned water supply organizations (CBWSOs). Ministry of Water, United Republic of Tanzania.
23. Saria, J., & Joseph, M. (2023). Evaluating community consultations, tariff compliance, and power dynamics in rural water governance. *Journal of African Social Sciences*, 18(2), 201–219.
24. Taber, K. S. (2018). The use of Cronbach's alpha when developing and reporting research instruments in science education. *Research in Science Education*, 48(6), 1273–1296.
25. United Nations. (2023). 2023 UN Water Conference on the midterm comprehensive review of the implementation of the objectives of the International Decade for Action, "Water for Sustainable Development" 2018–2028. United Nations.
26. Whaley, L., MacAllister, D. J., Macdonald, A. M., & Kebede, S. (2021). Structural power, elite capture, and meeting dynamics in community-managed water supply. *Geoforum*, 124, 112–124.
27. Yamane, T. (1967). *Statistics: An introductory analysis* (2nd ed.). New York, NY: Harper & Row.