



# Methodological Evaluation of Municipal Water Systems in Rwanda: A Randomized Field Trial on Adoption Rates

Hutwimana Byaruhanga<sup>1</sup>, Masudi Kasibya<sup>2</sup>, Ingabiro Gatera<sup>3</sup>, Kizito Nkubili<sup>4</sup>

<sup>1</sup> African Leadership University (ALU), Kigali

<sup>2</sup> Department of Advanced Studies, Rwanda Environment Management Authority (REMA)

<sup>3</sup> Department of Research, Rwanda Environment Management Authority (REMA)

<sup>4</sup> Rwanda Environment Management Authority (REMA)

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**Correspondence:** [hbyaruhanga@yahoo.com](mailto:hbyaruhanga@yahoo.com)

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## Author notes

*Hutwimana Byaruhanga is affiliated with African Leadership University (ALU), Kigali and focuses on Environmental Science research in Africa.*

*Masudi Kasibya is affiliated with Department of Advanced Studies, Rwanda Environment Management Authority (REMA) and focuses on Environmental Science research in Africa.*

*Ingabiro Gatera is affiliated with Department of Research, Rwanda Environment Management Authority (REMA) and focuses on Environmental Science research in Africa.*

*Kizito Nkubili is affiliated with Rwanda Environment Management Authority (REMA) and focuses on Environmental Science research in Africa.*

## Abstract

Rwanda's municipal water systems are crucial for public health and economic development. A systematic review encompassing methodologies used in previous studies examining adoption rates of municipal water systems in Rwanda. The review considered quantitative and qualitative methods. One randomized field trial found a 50% adoption rate for new water system technologies among participating communities, with robust standard errors indicating reliability. Methodological approaches vary widely but randomized trials offer a reliable method to measure adoption rates in municipal water systems. Future studies should consider longitudinal designs and incorporate community feedback mechanisms to improve adoptability of new water technology solutions. The empirical specification follows  $Y = \beta_{0+\beta} p X + \text{varepsilon}$ , and inference is reported with uncertainty-aware statistical criteria.

**Keywords:** Mali, Rwanda, Water Supply, Sanitation, Methodology, Quantitative Research, Randomized Control Trials

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