



# Scoping Field Trial Replication for Water Treatment Facilities in Ethiopia: Methodological Evaluation

Yonas Abera<sup>1</sup>, Mekuria Asfawegneshu<sup>2</sup>, Fasil Teklemariam<sup>3</sup>

<sup>1</sup> Department of Electrical Engineering, Ethiopian Public Health Institute (EPHI)

<sup>2</sup> Department of Electrical Engineering, Mekelle University

<sup>3</sup> Department of Mechanical Engineering, Addis Ababa Science and Technology University (AASTU)

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**Correspondence:** [yabera@aol.com](mailto:yabera@aol.com)

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### Author notes

*Yonas Abera is affiliated with Department of Electrical Engineering, Ethiopian Public Health Institute (EPHI) and focuses on Engineering research in Africa.*

*Mekuria Asfawegneshu is affiliated with Department of Electrical Engineering, Mekelle University and focuses on Engineering research in Africa.*

*Fasil Teklemariam is affiliated with Department of Mechanical Engineering, Addis Ababa Science and Technology University (AASTU) and focuses on Engineering research in Africa.*

### Abstract

The water treatment facilities in Ethiopia face challenges related to contamination and inadequate infrastructure, necessitating a systematic evaluation of current systems. A randomized controlled trial will be employed to assess the performance and impact of different water treatment methods across various regions. Statistical models will be used to evaluate the efficacy and variability of these systems. The analysis revealed a significant  $p < 0.05$  reduction in contamination levels among treated samples, suggesting that randomized trials can effectively identify more robust treatment methodologies. Randomized field trials have demonstrated promising results for risk reduction in water treatment facilities in Ethiopia, providing actionable insights into system optimization and resource allocation. Future studies should consider scaling up the randomized trials to broader geographical areas and incorporate feedback from local communities to enhance sustainability and efficacy.

### Keywords:

*Ethiopia*

*Geographic*

*Terms:*

*Methodological*

*Randomization*

*Evaluation*

*Controlled*

*Terms:*

*Trial*

*Theoretical*

*Infrastructure*

*Terms:*

*Contamination  
Risk Assessment*

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