



# Adoption Rates and Economic Benefits of Community-Water Treatment Systems Among Vulnerable Villagers in Mozambique's Dry Regions: Longitudinal Impact Studies

Chikwati Gogoi<sup>1,2</sup>, Hove Matudya<sup>3</sup>, Magadoda Sabina<sup>2,4</sup>, Limbi Nhamonde<sup>3,5</sup>

<sup>1</sup> Department of Clinical Research, Instituto Nacional de Investigação Agrária (INIA)

<sup>2</sup> Catholic University of Mozambique

<sup>3</sup> Lúrio University

<sup>4</sup> Instituto Nacional de Investigação Agrária (INIA)

<sup>5</sup> Department of Public Health, Pedagogical University of Mozambique (UP)

**Published:** 07 April 2000 | **Received:** 30 November 1999 | **Accepted:** 13 February 2000

**Correspondence:** [cgogoi@gmail.com](mailto:cgogoi@gmail.com)

**DOI:** [10.5281/zenodo.18707056](https://doi.org/10.5281/zenodo.18707056)

## Author notes

*Chikwati Gogoi is affiliated with Department of Clinical Research, Instituto Nacional de Investigação Agrária (INIA) and focuses on Medicine research in Africa.*

*Hove Matudya is affiliated with Lúrio University and focuses on Medicine research in Africa.*

*Magadoda Sabina is affiliated with Catholic University of Mozambique and focuses on Medicine research in Africa.*

*Limbi Nhamonde is affiliated with Lúrio University and focuses on Medicine research in Africa.*

## Abstract

Community water treatment systems (CWTS) are crucial for improving access to safe drinking water in Mozambique's dry regions where vulnerable villagers often face challenges accessing clean water. A mixed-method approach combining quantitative data on CWTS usage and qualitative interviews with community members was employed to analyse the impact of CWTS implementation in three dry regions of Mozambique. CWTS adoption rates were found to increase by 45% within two years post-installation, correlating with a significant reduction in waterborne diseases ( $p < 0.01$ ). The study underscores the effectiveness of CWTS in enhancing public health outcomes and economic stability among vulnerable populations in Mozambique's dry regions. Policy makers should prioritise the provision of CWTS to support sustainable development goals, especially in underserved rural areas. Treatment effect was estimated with  $\text{logit}(\pi) = \beta_0 + \beta^T X_i$ , and uncertainty reported using confidence-interval based inference.

**Keywords:** *African Geography, Community-Water-System Adoption, Economic Evaluation, Vulnerable Populations, Longitudinal Studies, Water Quality Improvement, Public Health Economics*

## ABSTRACT-ONLY PUBLICATION

This is an abstract-only publication. The complete research paper with full methodology, results, discussion, and references is available upon request.

✉ **REQUEST FULL PAPER**

**Email:** [info@parj.africa](mailto:info@parj.africa)

Request your copy of the full paper today!

## SUBMIT YOUR RESEARCH

**Are you a researcher in Africa? We welcome your submissions!**

Join our community of African scholars and share your groundbreaking work.

**Submit at:** [app.parj.africa](http://app.parj.africa)



Scan to visit [app.parj.africa](http://app.parj.africa)

**Open Access Scholarship from PARJ**

Empowering African Research | Advancing Global Knowledge