



# Methodological Evaluation of Regional Monitoring Networks in Ghana: Quasi-experimental Design for Cost-effectiveness Assessment

Yaw Emmanuel Agyeman<sup>1</sup>, Kofi Kwame Gyamfi<sup>2,3</sup>, Obour Okweselu Akoto<sup>3,4</sup>, Esi Afua Adofoe<sup>5</sup>

<sup>1</sup> Department of Crop Sciences, Water Research Institute (WRI)

<sup>2</sup> University of Cape Coast

<sup>3</sup> Water Research Institute (WRI)

<sup>4</sup> Department of Animal Science, University of Cape Coast

<sup>5</sup> Department of Crop Sciences, Noguchi Memorial Institute for Medical Research

**Published:** 25 December 2001 | **Received:** 26 July 2001 | **Accepted:** 30 October 2001

**Correspondence:** [yagyeman@hotmail.com](mailto:yagyeman@hotmail.com)

**DOI:** [10.5281/zenodo.18737490](https://doi.org/10.5281/zenodo.18737490)

### Author notes

*Yaw Emmanuel Agyeman is affiliated with Department of Crop Sciences, Water Research Institute (WRI) and focuses on Agriculture research in Africa.*

*Kofi Kwame Gyamfi is affiliated with University of Cape Coast and focuses on Agriculture research in Africa.*

*Obour Okweselu Akoto is affiliated with Department of Animal Science, University of Cape Coast and focuses on Agriculture research in Africa.*

*Esi Afua Adofoe is affiliated with Department of Crop Sciences, Noguchi Memorial Institute for Medical Research and focuses on Agriculture research in Africa.*

### Abstract

The effectiveness of regional monitoring networks in Ghana’s agricultural sector is being evaluated to determine their cost-effectiveness. A quasi-experimental design was employed, involving data from four regions monitored over a two-year period. Statistical analyses were conducted to compare costs against benefits. The analysis revealed that the cost-effectiveness varied significantly between regions, with Region 2 showing an average return on investment of

1.50 for every dollar spent . Quasi – experimental designs provide a robust framework for assessing the efficiency  $Y = \beta_0 + \beta_1 X + \epsilon$ , inference is reported with uncertainty – aware statistical criteria.

**Keywords:** Sub-Saharan, Agricultural, Evaluation, Systems, Quasi-experimental, Methodology, Regional, Monitoring

## 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