



# Impact Analysis of Water Scarcity Mitigation Programmes on Coastal Ghanaian Livestock Production: A Socio-Ecological Perspective

Ernesta Adzido<sup>1,2</sup>, Sakya Odoi<sup>3</sup>, Emmanuel Agyei<sup>2</sup>, Akosua Nkansaa<sup>4</sup>

<sup>1</sup> University of Cape Coast

<sup>2</sup> Water Research Institute (WRI)

<sup>3</sup> Department of Advanced Studies, Water Research Institute (WRI)

<sup>4</sup> University of Ghana, Legon

**Published:** 22 July 2002 | **Received:** 18 February 2002 | **Accepted:** 24 May 2002

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

**DOI:** [10.5281/zenodo.18740402](https://doi.org/10.5281/zenodo.18740402)

## Author notes

*Ernesta Adzido is affiliated with University of Cape Coast and focuses on African Studies research in Africa.  
Sakya Odoi is affiliated with Department of Advanced Studies, Water Research Institute (WRI) and focuses on African Studies research in Africa.  
Emmanuel Agyei is affiliated with Water Research Institute (WRI) and focuses on African Studies research in Africa.  
Akosua Nkansaa is affiliated with University of Ghana, Legon and focuses on African Studies research in Africa.*

## Abstract

Coastal Ghanaian regions face significant water scarcity challenges affecting livestock production. These areas are characterized by high temperatures and low rainfall patterns, leading to limited availability of fresh water for both human and animal consumption. A mixed-methods approach combining quantitative data from surveys and interviews with qualitative insights from focus group discussions was employed. Data was collected over a period of one year across three coastal districts to ensure comprehensive coverage. The analysis revealed that water scarcity significantly reduced milk production by approximately 20% in dairy herds, while feed conversion efficiency improved by about 15%. Economic benefits were also observed with increased revenue from better-performing livestock. Water scarcity mitigation programmes have had mixed impacts on coastal Ghanaian livestock productivity. While they provided critical improvements in water access and herd health, their long-term sustainability remains questionable given ongoing climate variability. Further research should focus on developing adaptive strategies to cope with seasonal variations and enhancing stakeholder engagement for sustained programme effectiveness. Policy recommendations include prioritising early warning systems and investment in resilient infrastructure.

**Keywords:** Coastal, Subsistence, Irrigation, Hydraulics, Livelihoods, Sustainability, Participatory

## 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