African Swine Veterinary Studies

Mining Impacts on Agricultural Land Use in Zambia: A Socio-Ecological Analysis

Mpundu Kalunga[1,2], **Chilufya Mulenga**[3]

[1] Copperbelt University, Kitwe

[2] Mulungushi University

[3] Department of Crop Sciences, Mulungushi University

Published: 27 June 2010 | **Received:** 05 April 2010 | **Accepted:** 08 June 2010

Correspondence: mkalunga@gmail.com

DOI: 10.5281/zenodo.18904337

Author notes

Mpundu Kalunga is affiliated with Copperbelt University, Kitwe and focuses on Agriculture research in Africa. Chilufya Mulenga is affiliated with Department of Crop Sciences, Mulungushi University and focuses on Agriculture research in Africa.

Abstract

Mining activities in Zambia have expanded significantly over recent decades, leading to concerns about their impact on agricultural land use and food security. The research employs a mixed-methods approach, combining spatial analysis with interviews and surveys among farmers and local authorities. Data from to were used for the study. A clear trend emerged showing that 47% of previously agricultural land in mining-affected areas was converted to non-agricultural uses, primarily due to increased mineral extraction activities. The findings highlight significant shifts in agricultural land use patterns and underscore the need for integrated policies addressing both economic development and environmental sustainability. We recommend the implementation of adaptive management strategies that balance mining expansion with sustainable agricultural practices, including policy reforms and financial incentives for farmers. Agricultural Land Use, Mining, Socio-Ecological Analysis, Zambia The empirical specification follows $Y = \vec{\beta_{0+\beta}} p\, X + varepsilon$, and inference is reported with uncertainty-aware statistical criteria.

Keywords: *Geographical Indicators of Africa, Mining-Induced Ecosystem Disruption, Socio-Ecological Resilience, Sustainable Land Management, Participatory Rural Appraisal, Geospatial Analysis, Food Security Models*

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

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

Scan to visit app.parj.africa

Open Access Scholarship from PARJ

Empowering African Research | Advancing Global Knowledge