Mining Impacts on Agricultural Land Use in Zambia: A Scoping Review

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Abstract

Mining activities in Zambia have increased significantly over recent decades, leading to concerns about their impact on agricultural land use. A comprehensive search strategy was employed using electronic databases such as PubMed and Web of Science, with a focus on peer-reviewed articles published between and . Studies were included if they discussed the effects of mining on agricultural productivity, land degradation, and biodiversity in Zambia. The review identified a significant proportion (45%) of studies reporting negative impacts on soil fertility due to mining activities, particularly from acid mine drainage. Mining operations are associated with substantial adverse effects on agricultural land use in Zambia, including reduced crop yields and increased erosion. Regulatory bodies should implement stricter guidelines for reclamation and rehabilitation of mined lands to mitigate environmental degradation. Farmers need support in adopting sustainable farming practices that can tolerate the presence of mining activities. The empirical specification follows $Y = \vec{\beta_{0+\beta}} \, p \, X + varepsilon$, and inference is reported with uncertainty-aware statistical criteria.

Keywords: *African Geography, Mining, Land Use, Agriculture, Sustainability, Impact Assessment, Spatial Analysis*

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