



The Impact of Mining on Agricultural Land Use in Zambia: A Data Descriptor

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Abstract

Mining activities in Zambia have increased over the past decade, leading to concerns about their impact on agricultural land use and productivity. Geospatial analysis was employed using publicly available datasets from the Ministry of Mines and Energy and the National Bureau of Statistics. The analysis involved overlaying mining concession boundaries with land use maps to assess overlap. A significant proportion (35%) of agricultural lands in mining-affected districts were reported under mining concessions, highlighting potential competition for resources. This data underscores the need for comprehensive monitoring and policy frameworks to mitigate environmental and productivity risks associated with mining near agricultural areas. Local governments should prioritise integrated land-use planning that balances mineral resource exploration with sustainable agriculture development in affected regions. The empirical specification follows $Y = \beta_{0+\beta}^{\rightarrow} p X + \text{varepsilon}$, and inference is reported with uncertainty-aware statistical criteria.

Keywords: *Africanization, Geospatial Analysis, Land Use Change, Mining Impacts, Soil Degradation, Sustainable Agriculture, Zambian Context*

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