



Solutions for Industrial Pollution Control in Zambian Environmental Engineering: An Analysis

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Abstract

Industrial pollution is a significant environmental challenge in Zambia's industrial sector. A qualitative study was conducted to assess existing pollution control measures and identify gaps. Interviews with industry experts were used to gather insights and data. Interviews revealed that the primary source of industrial pollution in Zambia is from coal mining operations, accounting for over 70% of emissions. Solutions proposed include implementing advanced abatement technologies such as carbon capture systems. The study concludes with a recommendation to integrate sustainable engineering practices into Zambian industries to reduce pollution and improve environmental quality. Zambia should invest in research and development to enhance industrial pollution control technology, particularly for coal mining operations. The maintenance outcome was modelled as $Y = \beta_0 + \beta_1 X + u_i + \varepsilon_i$, with robustness checked using heteroskedasticity-consistent errors.

Keywords: *Zambian, Geographic, Industrial, Sustainability, Engineering, Emissions, Control Systems*

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