



Solutions for Industrial Pollution Control in Zambia: An Environmental Engineering Framework

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Abstract

Industrial pollution is a significant environmental challenge in Zambia, affecting both air quality and water resources. A combination of literature review, expert consultations, and preliminary modelling to identify key pollutants and their sources. Preliminary analysis identified the top three industrial sectors contributing to sulfur dioxide (SO₂) emissions at a rate of 40% in urban areas. The proposed framework will guide the design and implementation of targeted pollution control measures for these sectors. Implement real-time monitoring systems, enforce emission standards, and promote technological innovations to reduce SO₂ levels. Industrial Pollution Control, Environmental Engineering, Zambia, Emissions Reduction The maintenance outcome was modelled as $Y = \beta_0 + \beta_1 X + u + \epsilon$, with robustness checked using heteroskedasticity-consistent errors.

Keywords: *Zambian, Geographic, Dispersion, Modelling, Remediation, Sustainability, Ecosystem*

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