



# Methodological Evaluation of Field Research Stations Systems in Ghana via Difference-in-Differences Model for Cost-Effectiveness Assessment

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## Abstract

Field research stations in Ghana play a critical role in environmental science by providing localized data for policy-making and scientific advancement. A DiD model will be applied to assess cost-effectiveness, with specific attention to station operation costs and output data from -. The DiD model provides robust insights into cost-effectiveness and can guide future station investments. Investment decisions should prioritise regions with higher cost-benefit ratios for research output. The empirical specification follows  $Y = \beta_{0+\beta} p X + \text{varepsilon}$ , and inference is reported with uncertainty-aware statistical criteria.

**Keywords:** *Sub-Saharan, Ghanaian, DiD, econometrics, randomized controlled trials, impact evaluation, spatial analysis*

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