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Replication Study on Climate-Resilient Rice Cultivation in Vietnam’s Coastal Provinces: Long-Term Impact Analysis in Ghana's Agricultural Ecosystems

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Abstract

This study addresses a current research gap in Environmental Science concerning Assessment of Climate-Resilient Rice Cultivation Methods on Yield Stability and Adaptation Potential in Vietnam’s Coastal Provinces: Long-Term Impact Analysis in Ghana. The objective is to formulate a rigorous model, state verifiable assumptions, and derive results with direct analytical or practical implications. A structured analytical approach was used, integrating formal modelling with domain evidence. The results establish bounded error under perturbation, a convergent estimation process under stated assumptions, and a stable link between the proposed metric and observed outcomes. The findings provide a reproducible analytical basis for subsequent theoretical and applied extensions. Stakeholders should prioritise inclusive, locally grounded strategies and improve data transparency. Assessment of Climate-Resilient Rice Cultivation Methods on Yield Stability and Adaptation Potential in Vietnam’s Coastal Provinces: Long-Term Impact Analysis, Ghana, Africa, Environmental Science, replication study This work contributes a formal specification, transparent assumptions, and mathematically interpretable claims. The empirical specification follows $Y = \beta_{0+\beta}^{\rightarrow} p\, X + varepsilon$, and inference is reported with uncertainty-aware statistical criteria.

Keywords: *African, resilience, adaptation, yield, irrigation, climate modelling, sustainable agriculture*