Climate Justice Framework for Adaptation Financing in Guinea-Bissau: A Methodological Approach

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Abstract

Climate change poses significant challenges for vulnerable regions like Guinea-Bissau, where rapid urbanization exacerbates climate-related risks such as flooding and droughts. The need for effective adaptation financing strategies is paramount to mitigate these impacts. The methodology employs participatory mapping and stakeholder engagement techniques to identify priority areas for intervention. A Bayesian hierarchical model is utilised to estimate the effectiveness of different funding streams, accounting for spatial heterogeneity and uncertainty in climate projections. Participatory workshops revealed that local communities prioritise access to clean water over other resources, indicating a strong need for targeted adaptation investments in this area. The proposed methodological approach provides a robust framework for designing fair and effective adaptation financing schemes, informed by community insights and climate science. It offers significant potential to improve resource allocation efficiency and enhance the resilience of vulnerable populations. Adopting this methodology will require collaboration between government agencies, civil society organizations, and international partners to ensure equitable distribution of resources and maximise impact. Climate Justice, Adaptation Financing, Participatory Mapping, Bayesian Hierarchical Model, Resource Allocation The empirical specification follows $Y = \beta_{0+\beta}^{\rightarrow} p\, X + varepsilon$, and inference is reported with uncertainty-aware statistical criteria.

Keywords: *Geography, Adaptation, Equity, Vulnerability, Methodology, Climate Change, Development Economics*

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This is an abstract-only publication. The complete research paper with full methodology, results, discussion, and references is available upon request.

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